More students. More engagements. Less impact?

Assessing the effectiveness of online versus in-person widening participation delivery

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Executive summary

Background

Anecdotal evidence suggested that, following the experience of delivering remotely during the Covid-19 pandemic, widening participation (WP) providers intended to permanently retain an element of online provision in future. This study, commissioned by Future U, the Lancashire Uni Connect, had two aims: to discover the true extent of this shift, and to determine what the impacts might be of a permanent move online on providers' abilities to meet their core aims.

Methods

To investigate the above questions, we conducted a series of surveys, interviews and focus groups with key stakeholders: school staff, pupils, and widening participation practitioners themselves. We were also able to access some relevant activity evaluations from one WP provider. This data was then analysed and synthesised to reveal the impacts of moves to online provision on the three groups, with particular emphasis on the needs of pupils, who form the target of most interventions.

Findings

Overview

- We asked teachers and practitioners to rate the impact of different types of provision on a number of scales including engagement, inspiration and learning.
    - In-person, face-to-face provision was most highly rated by both groups on all scales;
    - Pre-recorded videos were consistently deemed least effective, with live online sessions in the middle;
    - Comments from both school staff and WP practitioners suggested that schools had a strong preference for in-person delivery methods and may disengage with providers who focus on remote sessions.
- However, the vast majority of WP practitioners, around 80%, stated that their organisation intended to retain an element of online provision. This was due to practical benefits, eg:
    - Cost and time savings;
    - Convenience and flexibility;
    - Reaching more students, in terms of number of schools and geographical spread.

Impacts on pupils

- A number of potentially negative impacts on pupils of online provision were identified:
    - Engagement with online sessions tend to be lower than for face-to-face provision;
    - Lack of personal contact with the person delivering led to less excitement and fewer opportunities for informal conversation;
    - Emphasis may shift from deeper, more intensive engagements to greater quantities of less in-depth provision, risking "degradation of the experience";
    - These negative impacts are likely to be exacerbated for the most in need groups, who are more challenging to engage and benefit more from face-to-face contact.
- There were, however, a number of mitigating factors to the above findings:
    - The pupils who participated in our study were more accepting of remote provision than teachers or most practitioners. Although most had a mild preference for in-person sessions, some actively preferred online;
    - Students with certain personality traits, such as lack of confidence or anxiety, may benefit from remote provision;

- o The ability to ask questions was cited by many as an important aspect of WP provision, and certain sub-groups of pupils find this easier online;
  - o Some WP groups, such as young carers or those from military families, may find it easier to access remote provision;
  - o Evaluation findings suggest that where students are motivated, there is no evidence that learning is inferior from online provision.
- Where young learners could choose whether or not to engage with a session, for example via out-of-school offerings, engagement and response was often better. However there were drawbacks:
  - o Such sessions are more likely to attract pupils who are already keen and interested;
  - o The ease of signing up to online sessions can mean greater drop-out rates.
- Some session types need to stay in-person, while others can work well online:
  - o In-person campus visits are highly valued by teachers and many practitioners;
  - o Short sessions intended purely to relay information can work better online, as they can reach more students at a time;
  - o Some practitioners felt that mentoring was actively better done remotely, noting benefits to behaviour, concentration and honesty.

Impacts on schools

- Although schools expressed a strong preference for in-person activity, they also experience benefits from online provision, such as ease of timetabling and reaching more pupils at once. However, teachers recognise a trade-off between convenience and effectiveness.
- Some schools, eg those in remote areas, are clear beneficiaries of moves to online provision.
- However there were also reports of schools being overwhelmed by approaches from WP organisations who are no longer restricted to operating in their local area.

Impacts on practitioners and provider organisations

- Although a few practitioners were champions of online delivery, most felt that their job satisfaction depended on face-to-face interactions with pupils.
- Some practitioners were concerned that moves to remote provision could lead to job losses, and in one case this had already happened.
- Providers may find it easier to recruit by offering remote working. They may also begin to look for a different skills mix, preferring staff with greater technical know-how.
- It is significantly harder to effectively evaluate remote sessions, meaning that organisations will have a less clear idea of whether interventions are working.

Best practice for WP delivery

- Interventions designed for traditional delivery cannot simply be switched wholesale to remote provision – to be effective, online sessions need to be purposefully designed.
- Sessions should be organised to be quick to grab the attention of the audience and contain interactive or activity-based elements. Giving schools physical materials in advance of sessions can be helpful here.
- Maximal use should be made of the possibilities afforded by the use of technology, such as use of visuals and a variety of media.
- Delivering an online session well can require more skill than presenting in person, and may require careful thought and practice. Pupil participants particularly valued humour in remote provision.

Recommendations

Based on the above findings, we make the following recommendations.

1. It is tempting for organisations to embrace online delivery because they can reach more pupils in a wider geographical area. However, it is important to acknowledge that these activities have the potential to be less impactful than face-to-face delivery. Providers should ask themselves whether the total effectiveness of their provision is being negatively impacted by this shift of focus.

2. Students who are already interested are always likely to benefit more from any session, and moves online can exacerbate this, for example by making it easier for some individuals to disengage, or by removing informal opportunities for conversation. There was broad agreement that the hardest to reach are more in need of in-person interventions; providers should consider whether remote provision is damaging to their potential impacts on these groups.

3. However, some groups of pupils may prefer online provision, either because of their personality traits (eg lacking in confidence) or personal circumstances (eg young carers). Hybrid provision, carefully designed, could enable both these young learners and those preferring in-person interventions to be reached.

4. Although teachers voiced (strongly) negative views towards online provision, schools can in fact find this beneficial, enabling more pupils to be reached with less organisational difficulty. However, forcing schools to accept such sessions can damage relationships and ultimately make them look elsewhere for WP content. Allowing for school preferences, particularly among trusted partners, is likely to lead to greater acceptance.

5. Pupils, by contrast, expressed only a mild preference for in-person sessions, with some preferring online. Where providers have strong partnerships with schools, it may be possible to take the learners' views into account when deciding on provision type.

6. The ability to ask questions was repeatedly cited as an important aspect of WP interventions, however the evidence is mixed as to whether this is helped or hindered by moves to online delivery. As a result, we advise that providers monitor and consider questioning behaviour in all sessions and take steps to facilitate this if necessary.

7. Organisations running sessions that individuals can sign up to may find that there is no adverse effect on learning from being online. However, as noted in point 2, the tendency for the already-keen to sign up to such sessions may be exacerbated, meaning that overall WP goals can be missed.

8. It is clear from our findings that the ability to evaluate provision can be severely adversely impacted by moves online. If organisations do not carefully consider how to measure the effectiveness of their remote delivery, they risk being unable to determine whether or not their activities are impactful.

9. Successful online interventions often fall into one of three types, and practitioners might wish to consider focusing their remote provision in these areas:
   a. Short, snappy sessions intended purely to relay information;
   b. Interventions that are specifically designed for delivery online, including interactive elements, innovative use of technology and, potentially, physical materials;
   c. 1:1 mentoring sessions – although some disagreed.

10. Effective remote delivery can require different, or greater, presenting skills than those needed in-person. Organisations that intend to retain an element of online provision should consider providing specific training for staff in this area.

Introduction

The Covid-19 pandemic necessitated a wholesale move online by many organisations, including those conducting Widening Participation (WP) activities. This move has proved to have certain advantages for delivery teams, for example savings on travel time and cost, and the ability to engage whole classes rather than targeted groups. Because of the practical benefits associated with online delivery, some providers, such as Uni Connects or university WP departments, are planning a blended approach whereby they retain an element of online activity alongside face-to-face delivery.

Teachers who spoke to researchers in academic year 20/21 described certain beneficial impacts of moving outreach activities online (Canovan & Fallon, 2021), largely in terms of convenience and including larger numbers of pupils. There is, however, an awareness among all involved that disadvantages may arise from online approaches, including lessened ability to form relationships with young people, technical difficulties, and lower levels of engagement.

If a permanent shift to conducting certain WP activities online is to be contemplated, it is important to understand what the impacts on learners might be. As will be clear from the review of existing research in this report, this is a rapidly evolving area of practice, and there is little in the pre-pandemic literature to which we can turn. Although there is relevant material in both pre-Covid research into remote education, and in data gathered during the pandemic itself, there is a general paucity of research on the differential impacts of online and in-person outreach, and a need to distinguish between emergency and ongoing planned provision.

There is thus a clear need for further research on this point in order to give providers a stronger evidence base on which to make decisions on which approaches to take in the future. By gathering data from pupils, teachers, and WP practitioners themselves, this study gives a clear picture of providers' intentions towards a future remote offer and aims to clarify both the benefits and drawbacks of moving certain activities permanently online.

Review of existing literature

An overview of remote learning

Online education emerges from a history of distance learning, and with the introduction of modern technology this process has become easier and more streamlined (Farrell et al., 2019). There are two key methods for delivering online learning: synchronous and asynchronous. Synchronous learning refers to creating an online classroom whereby information is presented in real-time and there is the possibility for concurrent interaction between learners, instructors and content (McBrien et al., 2009). Conversely, asynchronous learning refers to a collection of information placed online to be browsed at a convenient time for the user, ie not live content, and can include pre-recorded videos/lectures, quizzes and uploaded module assignments amongst other things (Rehman & Fatima, 2021).

There are a number of advantages to such remote provision, such as improving access for those who live long distances from their chosen institution (Dodd et al., 2021; Kedraka & Kaltsidis, 2020) or for those who have other responsibilities outside of education (Longhurst et al., 2020). Modern online communication tools allow students to foster a community and encourage a sense of belonging, even when physically distant from their peers (Farrell et al., 2019). There are benefits to both synchronous and asynchronous learning; asynchronous provision improves flexibility for the student, as well as creating the option to refer to the material more than once. Synchronous learning does not have this element of flexibility; however, it has been shown that it can go some way to reducing the effects of distance created by traditional online/asynchronous learning (McBrien et al., 2009), though this lack of belonging has been documented throughout both approaches and so the effect size is uncertain (Mulrooney & Kelly, 2020).

A number of studies have explored the benefits and drawbacks of online education. Farrell et al. (2019) asked students and online educators for their perspectives on online teaching, aiming to find out what qualities or skills educators can use to create a remote learning environment. To do this, they conducted anonymous online surveys with each group, as well as semi-structured focus groups. Students suggested that the most effective online teaching needs to be responsive, with integrated assessment and feedback opportunities and clear communication. It should also build interaction and engagement with an online community, for example by using forums and peer support. Any asynchronous content should be supported by well-structured live tutorials. The most effective tutors used lecturing alongside other dynamic content such as videos, class discussion, or diagrams. Unsurprisingly, the least effective online learning involved isolation and lack of community and tutors who were unresponsive to student queries. Furthermore, students found passive content demotivating, for example where tutors simply spoke through a presentation for an hour, or when microphones were muted for the full session and hence student discussion was discouraged.

Because the method and purpose of online learning is often different to that of in-person education, it is helpful in engaging students that would otherwise be disinterested or unable to participate (Kedraka & Kaltsidis, 2020). However, there are also challenges. Students can attend classes but remain silent and be difficult to engage online, as well as learners connecting to the lesson and subsequently not attending (Farrell et al., 2019). Furthermore, online education runs the risk of relying on theory with little practical activity (Mphahlele et al., 2021), making it less effective for learning. Students in the Farrell et al. (2019) study suggested mitigating this via the use of discussion forums to facilitate group work, though this does not address the lack of physical activity, for example in a STEM subject requiring experimental practical work, a problem as yet unresolved.

As well as utilising both synchronous and asynchronous content, it is important to note that online learning is not 'all or nothing'. Many educational institutions have adopted a blended learning approach using both online and in-person methods (Jones & Lau, 2010). This can mean using in-person content alongside online resources such as study notes and message boards, thus attempting to capture all student personalities, those who prefer to learn remotely, and those who engage better in person.

Online education and WP during COVID-19

Online education during the COVID-19 pandemic was in many ways different to established remote learning programmes, as teaching was quickly moved online at very short notice. Approximately 94% of learners across 200 countries were affected by school closures by mid-April 2020 (United Nations, 2020). The speed of this transition forced universities and schools into "emergency remote teaching" (Hodges et al., 2020). This provision was designed with the assumption that the pandemic would be short-lived and education would return to normal relatively quickly, which meant a possible lack of harnessing the full benefits of online methods (Karalis & Raikou, 2020) and poorly designed courses, with a like-for-like switchover of content (Rainford, 2021). The move was also imposed upon learners, leading to reduced engagement when compared to contexts where participants have chosen online delivery over in-person (Rainford, 2021).

However, it is important to think about what counted as "good enough" in an emergency situation; Rainford (2021) noted that moving content was not a simple process and was required in a very short time, and much learning was effective even despite the limitations that were present. Additionally, the rapid shift in methods for teaching and learning alerted many to the possibilities available online.

Engagement

Student engagement was key within the pandemic. Keeping communication open and giving timely feedback to class exercises was an important tool for this (Longhurst et al., 2020), allowing students to feel that they were still connected with their learning. Additionally, staff members remaining flexible and altering content based on class understanding allowed for a dynamic workspace whereby students gained a more individualised course and an increased sense of ownership over their education. However, keeping this engagement high was a huge problem for many during the pandemic. Engagement has been linked to attainment, and the remote nature of online learning caused a lack of engagement and a reduction in a feeling of 'belonging' in many students (Mulrooney & Kelly, 2020) particularly with the stressors of a pandemic. Additionally, creating resources that promoted interactivity and support to encourage engagement was a major concern, especially with a loss of physical attendance measures (Longhurst et al., 2020).

Maintaining relationships, both between learners and between learners and teachers, was a point of difficulty (Karalis & Raikou, 2020). As previously mentioned, a way to mitigate this somewhat is to offer content synchronously (Longhurst et al., 2020), allowing discussion in real time, as well as dynamic tasks using techniques such as live polling and secondary methods such as message boards and social media groups (Longhurst et al., 2020). Additionally, being available during sessions for questions was important. Having teaching assistants, or even utilising students themselves to work around discussion points and answer questions whilst a session was ongoing, was found to be helpful (Bao, 2020).

Technology

It is worth mentioning the digital divide, which refers to broader inequalities in terms of access to technology and often internet use (Aissaoui, 2021) and was particularly evident during the COVID-19 pandemic when living life online was almost compulsory (Lai & Widmar, 2021). Research has shown that the divide was evident within school provision of online content. In a review conducted by Coleman (2021) it was found that delivery between private and state schools differed, with 85% private schools using online live lessons as compared to 50% of state schools even by the second lockdown (Montacute & Cullinane, 2021) with many pupils facing no access at all (Cattan et al., 2021) either by lack of laptop access or lack of online lessons provided. Hence, resources were not equal, and many students missed out throughout the pandemic. Of course, this has been changing since the focus has moved away from home learning and back to school-based classes. However, difficulties have continued.

As mentioned, the resources available to schools are likely to differ. Within the pandemic, the government created a scheme to provide laptops for schools to give to pupils who needed them and as of February 2022, 1.35 million laptops and tablets had been distributed (Education & Skills Funding Agency, 2022). This scheme has continued, where schools can apply for help with buying the technology that they need (Education & Skills Funding Agency, 2022). Additionally, in 2022, the government began setting out standards for digital infrastructure within schools (Department for Education, 2022) with the intention of improving broadband connections, access points and guiding schools towards where they need to invest in technology (Browning, 2022). However, this is a work in progress and is likely to take some time to fully evolve within school settings, and likely schools in more deprived areas will be further behind.

Furthermore, students and school staff have been expected to adapt to the use of technology with the assumption that this is a simple process. In 2020, 34% of teachers lacked confidence in the ability to carry out remote teaching (Ofsted, 2021). Winter et al. (2021) found that up to 40% of teachers had no formal training in the use of technology, with younger teachers more confident and using technology more frequently than older ones. At the time of writing, it is unclear whether these factors have improved post-pandemic and there is a lack of evidence for formal CPD for teachers with regards to using and installing new technology, which is arguably as important for improvements to be effective.

Design of online provision

As referred to in previous sections, the design of online provision is key to student engagement. Longhurst et al., 2020, for example, showed that it is possible to keep engagement high during remote delivery, but the measures to do so may be more involved than during traditional delivery, requiring interactive, flexible resources that allow students to be involved in their education rather than passive observers. It is likely to be necessary to modify existing programmes rather than move them wholesale online if impact is to be maintained; Rainford (2021) states that content should not be the same online as offline and needs to be modified to better fit the medium and benefits available.

It is clear that the methods used to transfer material to remote delivery are key. As Rainford (2021) states, offline lessons and online cannot be assumed to be the same. For example, an hour-long classroom session cannot be simply swapped for the same hour-long session delivered online. Some limited recent research has looked at what works for online educators when moving their content online. It was found that content should be broken into smaller units, at a 20-30 minute maximum,

and if video content was used, a 10–15 minute segment was ideal (Bao, 2020; Marshall et al., 2020; Rainford, 2021). Indeed, any content should be slowed down and broken up to ensure that key points are clear, and engagement is high. Students have stated that having a monotonous lecture or content feeling one-directional was the worst method for online delivery (Dodd et al., 2021; Farrell et al., 2019). This means that the structure of online WP is likely to have to be carefully thought out in order to deliver the same content in a meaningful way.

Little rigorous evaluation of what worked within WP during the pandemic has, as yet, been published. However, one notable exception is a paper by Dodd et al. (2021), which evaluated case studies from four university WP departments in NSW, Australia, selected to give a range of locations and student profiles. Unsurprisingly, many of the findings are similar to the previous literature on online learning, however the timely nature of this piece of work merits inclusion. The study found that the design of WP interventions was key to the success of online programmes during the pandemic. Interactive and flexible sessions were able to keep engagement high and ensured students still felt connected to their learning. Utilising online tools such as message boards, social media Q&A's and live presentations, as well as an online virtual learning environment (VLE) to store information students can browse in their own time, helped to create a well-rounded programme.

The future of WP Online

It has been suggested that the educational shifts brought about by COVID-19 may represent a good opportunity to develop new methods of teaching and learning (Karalis & Raikou, 2020). This applies not just to purely educational provision, but to WP activity; as Rainford (2021) notes, "online outreach has the potential to open up new ways to engage and inspire target learners over sustained periods through combined creation and curation of content". It has also been suggested that moving HE and WP activity online may go some way to closing the attainment gap, as it attempts to make material more accessible outside of traditional HE methods (Jones & Lau, 2010; Lambert, 2019).

However, an ongoing issue with moving WP activity online is that there is a very limited evidence base for what is effective. As mentioned, Dodd et al. (2021) are one of the few groups to have so far reviewed effectiveness in this arena, and their research focuses on COVID-19 specifically, hence post-COVID-19 measures are an unknown. This means that HE institutions and WP practitioners are having to work within a trial-and-error framework to find 'what works'. Current practise is not standardised across all institutions and best practice is often not shared. Evaluation methods are commonly based in traditional in-person methods and are perhaps less relevant to the online space, meaning that efficacy is unproven.

There are some indications in the literature as to what might be expected to be the impacts of retaining online WP provision. For example, some students may benefit; as previously mentioned, there are individual differences in that many students simply prefer to learn in person, whilst others feel more able to contribute when doing so at a distance (Karalis & Raikou, 2020). However, as found in previous studies, Dodd et al. (2021) note that it is possible that online activity will affect different sorts of students in different ways. Students who were quieter at on campus events engaged better when content was delivered online. Equally, it has been shown that many students are reluctant to engage actively online, for example, being unwilling to use microphones to give input (Kedraka & Kaltsidis, 2020).

The picture is equally mixed on the benefits, or otherwise, for schools. A study by Canovan & Fallon (2021) found that schools reported some benefits to online provision, for example in timetabling and

the ability to reach more students. However, other research has found that many staff and students express a preference for face-to-face learning (Longhurst et al., 2020; Mulrooney & Kelly, 2020), even given the options for synchronous and asynchronous learning (Karalis & Raikou, 2020).

In addition, many educators have found switching from offline to online difficult, for example having to learn to deal with a lack of non-verbal cues, and a lack of experience causing anxiety over whether methods used were correct (Farrell et al., 2019). In general, the success of remote provision depends on the capacity and expertise of both WP staff and school staff to be able to design and deliver a comprehensive package (Dodd et al., 2021), understand which method is best to disseminate different types of information, and use the tools that online delivery allows to produce an effective package (Rainford, 2021).

It is also important to consider that some WP activity going forward, even if hosted online, is likely to be delivered live in a classroom setting. This means that some of the disadvantages of home-based online learning discussed above are likely to be circumvented. However, it is unclear how much difference that this will make. For example, the lack of student engagement with online activity may still occur due to a reduction in the transactional nature of having the relevant instructor physically in the room delivering the material. Whilst teacher presence has been shown to have a positive effect (Farrell et al., 2019), it is unclear whether having a 'usual' classroom teacher versus the WP practitioner specifically will be enough to mitigate any negative effects. This effect again may be exacerbated if material is delivered 'pre-recorded' and thus more of the transactional aspect is lost. This may particularly affect feelings of disconnection with HE institutions (Dodd et al., 2021) and hence reduce the point in receiving WP in the first place.

This research

Although this literature review provides a strong evidence base with which to begin the discussion of the potential impacts of moving WP activity online, the majority considers online learning in general terms, and not WP specifically. In order to effectively determine the benefits or otherwise of keeping some content permanently remote, it is necessary to elicit the thoughts of teachers and pupils about this move, as well as those of the WP practitioners actually delivering content. Our study goes some way into initial explorations of how schools, students and WP professionals respond to both virtual and face-to-face delivery. This allows for a more complete look at the most effective methods of WP delivery, the impacts that they have had to date and continue to have, and most importantly, how those delivering and receiving the interventions would prefer to experience them.

Research questions

The above review raises a number of questions with regard to moving WP activities permanently online, which we attempt to address in this study.

1. Are WP provider organisations planning to keep some aspects of their delivery online permanently, and if so, why?
2. What is likely to be the impact on young people's learning and engagement with such provision if delivered online?
3. What is likely to be the impact on schools?
4. What is likely to be the impact on the provider organisations themselves?
5. What constitutes 'best practice' for online WP delivery?

Methodology

Our study aimed to gather perspectives from three distinct groups affected by a potential online shift: WP practitioners themselves, school staff facilitating WP, and pupils receiving it. This was conducted in two stages, with the first stage comprising of gaining a broad overview of the experiences of those who have been involved in WP both within schools and online using online surveys. In the second stage, interviews of school staff and WP practitioners, as well as a focus group with school pupils, were used in order to gain a fuller understanding of experiences and address the research questions in more depth. Secondary data was also used from a small-scale study conducted at another Uni Connect branch.

This study used a mixed methods design, though primarily qualitative data was collected. Surveys allowed for primary exploration, with interviews and focus groups offering a further in-depth look at interesting concepts and thoughts. The original research design used an experimental intervention; however, due to school capacity during the 2022 summer term, this had to be removed. This is addressed in the discussion section below.

a. Participants

All participants were resident and/or working in England; we took the decision to limit data collection to the English school system only, due to educational differences between the four UK nations.

Two surveys, hosted on Jisc Online Surveys, were used for initial data collection. The first was a survey of teachers and school staff, hosted between March and June 2022, and the second a survey of WP practitioners, hosted between May and June 2022. For the exploratory phase of this study into online WP provision, it was noted that the largest possible population would be most useful and therefore online surveys were chosen as the best method for attaining the most respondents.

Members of target groups were recruited through word of mouth, social media sharing as well as known contacts within the aforementioned industries. These methods were chosen in an attempt to reach the largest possible population, as well as the largest geographic spread across England. As the study was conducted in partnership with Future U, Uni Connect contacts were also utilised in order to spread further across WP organisations and their school contacts.

Interview participants were recruited from survey responses, via social media recruitment, and direct contact with interested parties. Interview respondents were required to have direct experience with online and in-person delivery of WP activity, though it was not essential to have experienced both pre-recorded and live online delivery.

Overall, 74 participants completed the WP practitioner survey, with three excluded due to not meeting criteria, leaving successful completion at 71. Of those who disclosed their employment, 43 were university employees and 28 worked in a Uni Connect branch. Most of these respondents were delivering to young people in Years 9-11 and Years 12-13, with 20% also delivering to Years 7-8. Around 80% of respondents were involved with delivery of WP activities; other roles represented were management, co-ordination, and evaluation, with many participants having multiple roles. The vast majority (90%) worked with target pupils, with some also providing activities for all who are interested or specifically for local groups. 46 participants had experience of pre-recorded online delivery, and 69 of live online delivery. All had experience of in-person activities.

Following this, six WP practitioners completed an interview, four from a university WP department and two Uni Connect branch employees (see Table 1). Interviewees were selected partly to achieve a geographic spread, with organisations taking part from the East Midlands, North West, South West, and East Anglia. An attempt was also made to achieve a spread of high and lower tariff universities, however there was a poor response rate from the those at the lower-tariff end of the scale. This is dealt with in the discussion.

22 participants completed the school staff survey, with 12 excluded due to not meeting criteria, leaving successful completion at 10. Following this, two school staff completed an interview (see Table 1).

In terms of data collection among young learners, 12 participants completed a pupil survey for those experiencing UCLan online tutoring alongside other forms of WP intervention; all of these were usable, and none were excluded. A further cohort of pupils who received a mixed-delivery employability session were invited to complete a survey, but school closures related to a heatwave prevented this from taking place.

Following this, a small focus group was held in one school, with three students, with the school being recruited via Future U contacts. Pupils were put forward for the focus group by the school and consent was gained from both the pupils themselves and their parents. For anonymity, participants will be referred to using codenames (see Table 1).

Interviewee	Description
Megalodon	Member of school staff
Plesiosaur	Member of school staff
T-Rex	Uni Connect practitioner
Stegosaurus	University WP practitioner
Allosaurus	Uni Connect practitioner
Diplodocus	University WP practitioner
Triceratops	University WP practitioner
Velociraptor	University WP practitioner
Pteranodon	School pupil
Ornithocheirus	School pupil
Archaeopteryx	School pupil

Table 1: Interviewees and focus group participants by role

b. Definitions

This report often speaks about online content in terms of pre-recorded videos, or live online classes. For clarity, and if not directly indicated, these refer to asynchronous and synchronous content respectively as mentioned within the above literature review.

c. Ethics

Ethical approval was sought from the University of Central Lancashire ethics board prior to proceeding with data gathering, and approval granted.

Participants were required to complete a consent form prior to taking part in the study. As part of their consent, they were given an information sheet detailing the purposes of research, important definitions and what would be done with their data. For school pupils, an extra form was included for parental consent, and data collection did not proceed unless participants had returned both parts.

Participants were able to withdraw from the research up until the point analysis had begun, or their data was anonymised. Once the anonymisation of data had begun, removal was no longer possible, and this was explained to respondent prior to completion. Names and contact details were collected with permission from those who indicated that they would like to be contacted for a follow up interview. However, to preserve anonymity, no identifying details were stored with survey responses once analysis had begun. The identities and locations of schools taking part was entirely anonymised once data collection was complete so that no pupils are identifiable.

Furthermore, for the school staff, pupil focus groups and WP practitioners, consent was granted for the research taking place through a gatekeeper to ensure that there was awareness that research data would be taken from the organisation. This was usually a department manager or a member of the senior leadership team within a school.

Results

Results are organised into seven distinct sections, each examining a different theme in detail. Responses from all data streams are spread across these, except for the Pathways case study and tutoring survey which appear in a separate section which focuses on pupils' views.

The study starts by attempting to gather a broad overview of participants' attitudes to different WP delivery types, and their plans for the future, in order to provide a baseline from which to begin our investigation. Later sections go on to explore nuance in different aspects of these views.

Respondents' views of the effectiveness of different delivery types

Both practitioner and school staff respondents were asked to think about their experiences of three different delivery modes for WP provision – pre-recorded, live online and in-person – and rate them on a scale of 1-5 for a number of measures. First let us consider the response from WP practitioners:
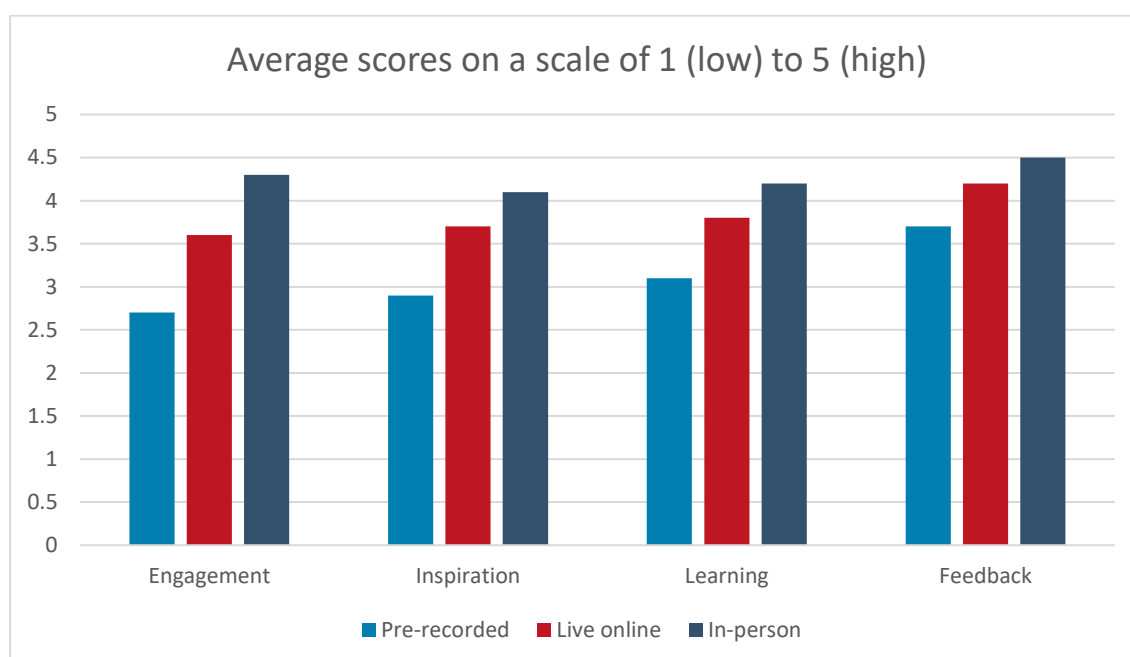

Figure 1: WP practitioner views on effectiveness of different session types.

Practitioners rated in-person delivery methods as more impactful in terms of engagement, inspiration and learning, and reported that they had received better feedback for in-person sessions. Figure 1 above shows the average score given by those who gave a score, and clearly demonstrates that live sessions are rated better across the board than pre-recorded, and that in-person activities score best on all measures.

However, this does not quite give the full picture. For engagement, inspiration and learning we allowed respondents to choose a 'don't know' option, as depending on delivery mode they may not have been present during the session. This option was selected by a quarter to a third of participants for pre-recorded sessions, and 10-20% for live online sessions, but zero respondents for in-person delivery. As well as scoring worse than 'traditional' sessions, therefore, there is also a significant lack of information apparent as to how well online sessions are succeeding.

Our teacher/school staff respondents were asked to rate sessions for engagement, inspiration and learning, but instead of feedback we also asked them to comment on how interested in post-session

discussion of the topics their pupils had been. We did not allow a 'don't know' option for teachers as they were being asked to comment solely on interventions that they had witnessed.

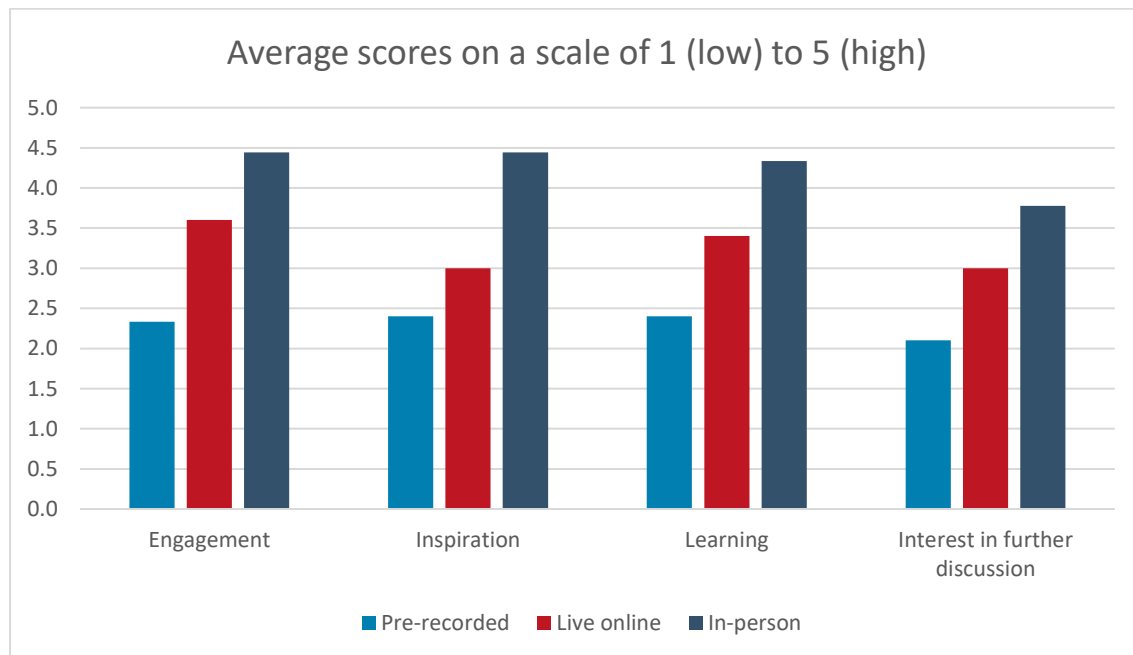## Average scores on a scale of 1 (low) to 5 (high)

Figure 2: School staff views of different session types

As can be seen in Figure 2, school staff responses follow a similar pattern to that seen from practitioners, with in-person sessions rated most highly and pre-recorded least well. It is notable that these participants consistently rated remote activities a bit lower, and in-person activities a bit higher, than practitioners. However, small numbers in the school staff cohort mean that this finding should be treated with caution.

Despite the fact that the survey sample for teachers was small, the qualitative aspects of the survey tended to corroborate the above quantitative findings. Of our cohort of 10, eight expressed quite strongly negative views of online WP provision, with only one stating that they would prefer a mixture of online and in-person delivery. Teacher Megalodon, meanwhile, described pre-recorded sessions as "the worst-case scenario". This echoes findings from the literature review (Karalis & Raikou, 2020; Longhurst et al., 2020; Mulrooney & Kelly, 2020) that both staff and students tend to prefer face-to-face learning.

Future plans regarding online delivery

We asked practitioners what their organisation's intentions were in regard to future provision. In our survey, the large majority stated that their organisation was planning to retain an element of remote provision post-pandemic, with most already doing so, as can be seen in Figure 3. In addition to this survey finding, every WP practitioner interviewed had the intention to keep at least some elements of their delivery online. The extent of this varied, however, with some feeling that in-person events should always be the default option, with virtual delivery only as a back-up option, or information/pre-recorded videos to be accessed outside of the rest of their usual WP delivery.

Overall, there was a feeling that a hybrid model would allow institutions the 'best of both worlds' and hence that delivery modes will continue in this fashion going forward. Practitioner T-Rex said that they are working with the preferences of schools and students: "Some of the schools that I work

with are complete technophobes and won't touch an online event with a stick... whereas some of them really enjoyed those kind of virtual events. So, I think we're going to have to as a sector deliver a blended approach moving forward just to meet the demands of what schools and students are saying to us."
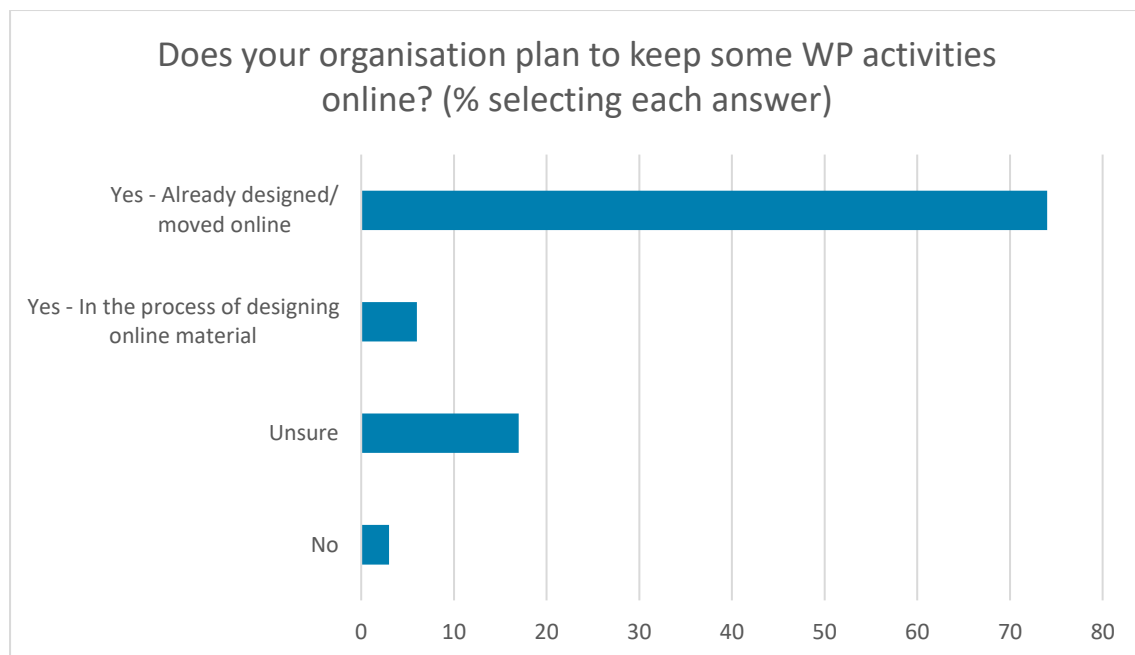

Figure 3: WP provider plans for future delivery

Viewed in broad brushstrokes however, teachers had a negative view of moving WP online (although a deeper inspection finds a lot more nuance, which is explored in the remainder of this report). Megalodon expressed conflicting views about plans to keep some sessions online in the future. As discussed below, his school intends to retain some online delivery for reasons of time, scheduling and convenience. "Next year, we're going to have a hybrid model for sure. Just because I think we'll be able to do more. In an ideal world, everything for me would be done in person, but I know that's just not possible."

Teacher Plesiosaur, who was the most pro-online member of school staff who participated in the study, was clear that remote provision should be used in conjunction with in-person activities, particularly post pandemic where everything has been presented online. "I think if you are just online then it's not fair to young people. They've lost out so much," she said.

The relative impacts of online and in-person delivery are discussed in the remainder of this report.

Practical benefits and disadvantages of remote provision

Practitioners saw a number of clear benefits of retaining a hybrid model, including time and cost savings, flexibility, convenience and increased reach, both in terms of number of schools/pupils targeted and geographical reach, as well as broader issues such as environmental impacts and sustainability. There were however drawbacks, including technological difficulties, as explored in more depth below.

Time and cost

The most obvious practical implication of moving WP events online is a saving in both time and cost for the provider, arising from lack of necessity for delivery staff to travel. One respondent provided a succinct summary of this benefit: "Our team would be able to deliver more events as we wouldn't need to take travel time into account, and it would certainly make our budget go further." This impact was stated again and again by practitioners, who said it would lead to "an increase in the number of events we run," or that "we would be able to work with more schools in a virtual format". There was also a reluctance to return to face-to-face delivery due to the 'lost' time; as practitioner Velociraptor put it: "You have to probably sacrifice a few online sessions to do one in person." However, these statements often come with caveats as to a commensurate reduction in effectiveness, or as one put it, a "degradation of experience":

> "[Moving activities online] would change the way that we work. More students, more engagements but less impact."

As well as a time benefit to practitioners, online delivery can also provide a time benefit to schools, for example in allowing staff members with limited availability to attend events, as well as a cost benefit where the alternative is pupils and staff travelling to campus. This time saving can have a beneficial impact to student engagement, as one survey respondent explained:

> "When I have delivered to students who have travelled from further afield and have been up since 5am then by the time they get to our session they are usually very tired and less likely to engage."

The issue of cost is particularly salient at the moment, given historically high rates of inflation and in many cases budgetary cuts. Teacher Megalodon has noticed the impact that this has had on the offer he is presented with by providers: "Services are being cut left, right and centre, and things that were available for schools last year are no longer available in that format, but there might be an online format," he commented.

Convenience and flexibility

Many practitioners spoke about the convenience of online WP delivery for schools and for themselves. Practitioner T-Rex mentioned how much easier sessions are to fit into the school day, reducing extra staffing costs and timetabling issues: "They can string them in very easily. They don't require any additional staffing or staff cover and they can do it from anywhere," said one, while another respondent explained: "They welcome us into school as well, yet as it would take up to 11 weeks to see one form group at a time, they are happy for us to stream online workshop into 11 groups at the same time."

Our teacher interviewees both spoke about the practical benefits of online delivery in terms of convenience and organisational ease. Megalodon described a situation where he was attempting to organise the same session in-person for six classes, "but that person can only do two [sessions] on a Tuesday, then aren't free for a month. It loses impetus. [The alternative is] you collapse the whole school day, and they do one after another after another after another. And neither is ideal because I'm sure by the sixth session… [the provider is bored of] the same thing time and time again." Megalodon mentioned he had been trying to organise a particular workshop for four months at the time of interview: "I've got one class left to do and it just keeps getting like, moved and moved and moved. And now we're looking at September." While he strongly prefers in-person delivery, he believes hybrid is a better approach in the future to avoid these types of difficulty.

Teacher Plesiosaur was one of the stronger advocates for the inclusion of online provision among school staff. Although she acknowledges that online delivery does not work for everyone, "…for the majority, they made it work and… they're coming out the other side saying 'I can do this'. So, I think it's a bit of a shame to not have [an online element] as an option… as long as you then add the face to face."

However, although some teachers in our survey did see benefits to online provision in terms of logistics and flexibility, these statements were invariably caveated with their negative impact on pupil engagement, for example: "Holding [interventions] online helps with participation and numbers and logistics, but they are never as engaged."

Geographical reach

Any geographical limits on the reach of WP providers have effectively been removed by the advent of virtual delivery, with practitioner T-Rex noting that "when we go out to schools, we're quite limited by sort of the geography, how far we can travel in a day, what we can do".

The impact of greater physical reach is particularly positive for those providers who are less rooted in their local community, for example, the WP department of a high-tariff university. One such institution told us that an established programme of subject taster sessions "can reach far more students by running online," while another noted that "If schools are typically out of catchment and struggle to come in for insight days or uni visit, then there is still the option for exposure". Furthermore, the extended reach allows information to be offered to an unlimited audience. Practitioner Velociraptor stated that "across the board, for all of our work in WP, is the ability for young people across the country to sit and experience any of our subject tasters. We'd have never been able to do that in person before because it's just not feasible to bus somebody here for a one-hour session".

However, this increased geographic reach comes with a set of challenges as well as benefits, for example in potentially eroding the relationships forged between providers and schools. We consider these in more detail later in the report.

Technological difficulties

Effective online WP provision is fundamentally dependent on functional IT, as both schools and pupils need to be able to access equipment and use it effectively to receive interventions delivered in this manner (Coleman, 2021). However, more than two years after the beginning of regular online delivery, such access is not a given, though attempts are being made to change this (Browning, 2022; Education & Skills Funding Agency, 2022; Winter et al., 2021). This is a practical issue affecting both schools and WP providers.

One issue was caused by the range of technologies in common use. Many WP practitioners professed a dislike of how many different delivery platforms there are, and that it can be "challenging" to deal with them all. Another common sentiment among WP practitioners was that not all schools or teachers are confident users of remote communication technology, with outdated equipment and staff who lacked confidence in using it. "I am hesitant to run online WP activities as this can be technical for [schools] to set up," said one practitioner, while others described teachers as "stressed" or "challenged" by the use of such systems. This corroborates findings mentioned in the literature review (Browning, 2022; Ofsted, 2021; Winter et al., 2021)

There were a range of opinions over whether technology failure negatively impacted delivery or not. Practitioner T-Rex stated: "If a problem arises with digital, it's much easier to be like, you know what,

we'll kind of ditch our tools and we'll just give up." However, practitioner Diplodocus felt that issues were easy to move through and as the COVID-19 pandemic progressed they and schools improved at handling technological issues; "We've just got more used to it and probably less flustered when things don't work and just a bit more au fait with OK, we'll try this and we'll try that and we'll find a way around it."

A sense of frustration was felt by some practitioners recalling situations where there had been a loss of control over technology. Practitioner T-Rex has found that "Sometimes it's been a case of there's been technical difficulties and we can't really do anything from our end because it's all with the school, so it has kind of impacted the success of the activity." Additionally, some practitioners expressed a belief that this situation may not ever get better, for example, practitioner Diplodocus: "I don't think we're ever going to get away from that. I just think it's just the nature of IT, isn't it?"

Others were very casual about it, with a question over whether in-person delivery has ever been measurably better in terms of disruption to events. Practitioner Stegosaurus remarked: "How many more times we had a tech failure than we had a 'M62's blocked'? The M25 is blocked and we're late because of this, that or the other and traffic… I think over time that would have sort of flattened out, if that makes sense, and not caused as many problems."

Conversely, other participants commented that the attention of a class of pupils was a fragile thing that could be destroyed by a technical hitch. When we interviewed teacher Megalodon, internet problems delayed the session by 10 minutes. That would have been more than enough to wreck the session, he said: "[Even] two minutes can ruin – ruin! – the session for all concerned, because you can lose a class very, very quickly."

Impacts on pupils of moving provision online

The most important consideration when assessing the wisdom of moving WP activity permanently online is the impact this is likely to have on pupils' learning and engagement. There are a number of aspects to this, which are considered in this section.

General impacts on pupil engagement

Pupil engagement was mentioned across all interviews and many survey responses as the key to effective delivery, and the teachers and school staff who completed our survey were clear that pupil engagement generally suffered with online delivery. Pupils "switched off quicker," during online delivery, or the experience was "passive – sometimes like pulling teeth". By contrast they are "more enthused by in-person sessions," and "learn better… and come away with a better insight into future jobs and career progression". Online sessions offer "less engagement and therefore no inspiration," commented one participant. This reflects the issues with engagement raised in our review of the literature (Dodd et al., 2021; Farrell et al., 2019; Mulrooney & Kelly, 2020).

Teacher Megalodon was particularly critical of the impacts of pre-recorded sessions, which he describes in colourful and evocative terms. "The children are truly passive," he said. If a video pauses for a related activity to take place, "it's like trying to raise the dead".

Online fatigue was a commonly mentioned factor, which developed during the pandemic and has culminated in many practitioners and teachers saying that pupils have "had enough" of online provision. Megalodon related the situation to his own experiences of online interactions. "I know from having done online lessons and having been in a load of Zoom meetings over the pandemic, I tune out… I'll start doodling… If I'm doing that as a professional in a professional meeting, what is a

hormonal 14-year-old thinking of?" Meanwhile practitioner Velociraptor commented that online fatigue was "very real".

Remote sessions were often met with an unengaged response, and the reasons for this can be hard to discern by the practitioner who is on the other end of the screen. As one commented, "You get the feeling that some of them would much rather it be a passive relationship and don't want to get involved. Whether this is because of lack of confidence or just not being bothered to get involved, I don't know." Meanwhile practitioner Diplodocus said that "students have got the capacity to sit and listen but not really engage because... if they sit behind a laptop, it's hard to say how much they're actually taking in and what they're actually doing". This was echoed several times:

> "You don't even know if they're there anymore. I mean, have they just pressed and gone off?" (Practitioner Stegosaurus)

> "It feels like you're talking to nobody." (Practitioner Diplodocus)

> "There's that underlying tendency of not quite knowing if they've just put it playing on their phone and they've wandered off, or if they're actually sat there engaging" (Practitioner Velociraptor)

Teacher Megalodon gave a striking illustration of the lack of impact that an online session can have. He evaluates every WP or careers intervention using a survey which asks pupils to rank the session on a scale of 1-5. Usually opinions on sessions vary: "With the in-person stuff, it diverges into they liked it or they didn't like it. It's not just OK... even when they tell me that [sessions] are bad, you know, 'it was boring', that's still valuable information for me." The experience of evaluating remotely delivered activities is, however, very different. "With the online stuff, when you've got a scale of 1-5, everybody puts 3. And it really tells you nothing because it's just neither agree nor disagree." He felt there is an element of trying to "be nice" to him because he has organised the sessions, but another conclusion is that students are not engaged enough with the events to even have formed an opinion.

Practitioners noted that for some sessions where engagement appeared to be high, only part of the group was interacting: "[Response was] mostly positive, although we only see the reactions from those to choose to interact during the sessions, ie, those who are finding it most exciting." These people may be the ones who were already keen – in other words, not necessarily the key WP target audience.

Although all the views above are quite negative about the impacts of online delivery on engagement, there were a group of WP practitioners who had a more positive view. Practitioner Triceratops, in particular, felt that pupil opposition to online delivery was overstated:

> "Often students have strong opinions on whether they want to have a session online or they want to be in person but often then when you provide them with it, they're quite happy with what you've provided them. We totally find that students are like, I don't like doing things online. There's too much stuff online now. I hate it. I want to see you in person and we're like, OK, but you can't, but you can do this session and they're usually OK with it."

It is worth mentioning that some practitioners felt that similar issues could be found in-person, where students still were reluctant to engage. Practitioner Allosaurus said: "[In] some face-to-face sessions, the students don't engage, and they won't talk to you. They're shy or they're too cool for it." Participants to the practitioner survey also stated that this effect had been reported to them.

One said: "Teachers have noted that because so much has moved online some students lack the confidence to talk to externals in real-life and are now much less engaged with in-person sessions."

However, if this lack of engagement occurs in person, it can sometimes be mitigated through interventions by the delivery team in a way that is more difficult when presenting virtually. For example, practitioner T-Rex said, "I think if students don't engage in the activity and then you know, they'll get bored and they don't want to participate anymore and you kind of lose them, whereas in person I think you know you can always shake it up or change things a little bit."

Personal interaction and 'being there'

Ease of interaction and a feeling of connectedness are cited as important drivers for face-to-face learning in the literature (eg, Kedraka & Kaltsidis, 2020), so we might expect to find that these are also vital in the debate over moving WP interventions online. It is unsurprising, then, that relationships and personal interaction were points of discussion for all participants. Practitioner T-Rex felt that "In-person probably always has the edge over online activity because you can't replicate that human contact." Practitioner Stegosaurus stated the importance of being face-to-face as "they see you as a person and you can interact with them as people. And you can see who you're talking to".

In fact, many practitioners felt that the inability to have personal interaction with both pupils and teachers online was a major issue, with in-person engagements preferred for a number of reasons:

- Role modelling: "I work for what is seen as a 'posh' university – seeing a real person and that I am normal really breaks barriers down."
- Reactivity: "I can react to questions there and then. It is easier to amend/ go over things that students do not understand."
- Atmosphere and 'buzz': "In-person sessions generally generate a more intense, enthusiastic response. Probably because there is a strong element of 'working the room' and managing group dynamics with a view to enhancing student's experiences."
- Relationships with schools: "Engaging with schools is easier in-person as so much is relationship based. Our school engagement has really taken off since restrictions have eased, and those relationships would be difficult to maintain online only."

The key issue, however, seems to be the relationships that can be built with pupils in face-to-face settings. This can help with identifying the specific needs of student participants, offering personalised support, having informal and more personal conversations, spotting whether pupils are understanding what is delivered, and providing a greater depth of content. Teacher Megalodon feels that technology removes the ability to interact with all pupils in a session: "[The deliverer doesn't know about] the kid in the corner that they can't see just because the camera doesn't pan wide enough, or the quality of the picture is not [good enough]." Additionally, everyone seemed to be in agreement that "if they're [pupils] sat in the same virtual space for any length of time it gets quite boring, and you lose that interaction quite quickly" (Practitioner Velociraptor), demonstrating a need for dynamic online sessions.

One theme that survey respondents and interviewees often raised regarding remote provision was the inability to adjust to prevailing connections in the classroom in real time. It's obvious that this will be the case for pre-recorded information, as it is entirely inflexible, but the distance imposed by the intervening screen means it is also an issue for live online delivery. As teacher Megalodon said: "The person delivering can't see the room, can't read the room as well. So, then they don't know how to alter tack if they're thinking, well, this has fallen flat." This was echoed by WP practitioners,

with practitioner T-Rex summarising that "it's… a bit out of our hands about… exactly how much we can do because we're not there", and practitioner Stegosaurus stating that "you read the room as it's going along… we've all done it some days and [you're] halfway through like this is not going well. This is seriously not going well, and you can make those changes whereas you just can't when it's online."

Not being physically in the room also made it more difficult to assess the quality and impact of sessions because, as one practitioner survey respondent put it, "you are not there physically to see engagement/get them to do evaluation". Many supported this, with the idea that formal feedback is easier to gather from students in front of you. Practitioner Diplodocus stated: "If you stick a piece of paper under a student's nose and tell them they can't leave the room until they filled it in, the chances are you're going to get some feedback." We discuss this further in later sections.

It is clear from the above that many practitioners saw being physically 'in the room' with pupils as beneficial, and this was also the case with respondents to our teacher survey. All were enthusiastic about the in-person experience, with some explicitly citing the physicality of sharing a space as an important factor. They spoke of the benefit of meeting a "real person", and of the activity "feeling real" when delivered in the classroom. A variety of reasons were given for this; for example, one respondent commented that a move to online provision would be "detrimental – you can't beat the human element and being able to read and respond to a room. It's not the same online. Students respond better for some reason," while another noted that "…without the person in the room, there was a more passive attitude. For me, having the person there makes students pay more attention and be active listeners."

However, there were some areas where practitioners felt it was actually beneficial *not* to be in the room. For example, the anonymous nature of online communication was attractive to some young people; "Online is good for chat functions in large groups – some students appreciate the anonymity of chat function rather than in-person discussion." This feeling is echoed later in this report with regards to the sorts of questions pupils feel able to ask during sessions. There was also a suggestion that an online session is easier in practical terms to follow up on: "[At in-person events] usually people do not have time to linger on site before their next activity, so the usual chat links and follow up emails that might follow an online meeting are not happening for site meetings."

Trade-offs between numbers reached and depth of engagement

A point of concern raised by some was that by engaging with more or broader audiences, some of the depth of relationships or impact of activities is lost. These worries were often couched in the context of a trade-off between the time saved and the quality of information passed on. Practitioner T-Rex encapsulated this concern: "The assemblies that we do, I mean it would take a whole day to deliver a workshop to a whole year group whereas we could do that in an hour in a virtual setting. But does it have the same impact? I don't know." This uncertainty was echoed by practitioner Stegosaurus: "It's great because it you can get so much more done, but I kind of feel like you're scratching the surface rather than actually getting to the core of it."

Similarly, our survey respondents frequently made comments indicating that they felt a trade-off between the increased reach offered by online provision and a commensurate challenge to depth of interventions. One provider commented that moving online would lead to "degradation of the experience, but the possibility to also work with new schools beyond our current geographic reach".

Another practitioner commented that "We can [now] work with schools who we don't target but who request sessions." However, it is not clear from such statements whether there is any

detrimental impact on the schools that the organisation previously worked with; a key question is whether the shift to offering provision to non-target schools is potentially detrimental in terms of diverting staff time, or whether it is a cost-free venture.

There was some recognition that as life gets further towards 'normal' and in-person delivery resumes to a larger extent, a change in geographical targeting might be a difficult balance, particularly in that local school relationships were starting to suffer. Practitioner Velociraptor said: "I think as we move to what is arguably our first full in-person year next year, when we're having to think carefully about that and where we put those efforts, I think if we want to focus again locally, we're going to have to pull back on some of the national stuff. We haven't made that move yet, but I think we've started to notice it already."

Participants in our teacher survey were also aware of this trade-off. Some showed an awareness of the logistical benefits of moving online, both in terms of ease of organisation and being able to "hit more students"; however, in every case, this was accompanied by a comment that engagement or impact would be lessened. As one stated, "Although it may be more expensive and time-consuming travelling to individual schools, I think it would be worth it for the impact on pupils."

Interestingly, it was not always the case that providers felt they increased their reach by moving online; practitioner Triceratops stated that they actually get better attendance from in-person events than virtual: "We get a better attendance by targeting a specific school group where their teacher can bring them along and they have to turn up." This also touches on the issue of higher drop-out rates for online events, discussed further in the next section.

Differential impacts of in-school sessions and individual sign-up activities

One thing that became clear during the course of this study is that the impacts of moving school-based WP online are somewhat different to those of delivering remote events that individuals sign up to independently. The latter delivery type is often used by high-tariff institutions, and several of our practitioners discussed this in our surveys and interviews.

In general, survey respondents felt that pupils who had signed up for online sessions as individuals, and who actually attended, were more responsive than those who were participating through school. "Pupils get less engagement in an online talk delivered to their school… However, when they attend as individuals… they enjoy attending the sessions and have high engagement generally," said one, while another commented that "…students attending our online activities in their own time respond very positively compared to when in the classroom". Additionally, all of the WP practitioners interviewed stated that they had hosted virtual events for students to self-select or apply for themselves, which had mainly been successful.

The element of choice appears to be important. One participant commented that "Pupils aren't as engaged when they don't have a choice in the session during school time in-person." This bears some relation to findings in the earlier literature that pupils who are able to choose their delivery method learn better (Kedraka & Kaltsidis, 2020); here we can see a choice to engage with an online activity leading to an increased interest in that activity.

There can also be a benefit to using technology where the student has their own device or computer, as some factual content can be easier to impart directly to an individual screen. This is more likely to be the case at home than in class. As one practitioner noted: "A student finance talk is the kind of content that includes facts and figures, so it may be easier for students to take in this

information via their own screens where they can make notes directly from their computer or take more time to read the information."

The question of who chooses to attend these out of school sessions is, however, an open one, with many providers worrying that they were only accessing pupils who were already considering higher education and hence that they may be missing WP students who are less certain of their future choices. Practitioner T-Rex felt that "with the student self-sign-up events, it is very much the students who want to be there and the students who you know, we want to work with, but it may not necessarily be the students who are kind of more reluctant to think about university or higher education, which is why we exist". The suggestion that online events may be bypassing WP target students is echoed by other practitioners, for example:

> "The kind of students that we're seeing coming through our programs where they're having to apply for them are students who are interested in university, are interested in going to a high tariff university, and think they can do that already – Are probably considering [our university] and think this is going to help their application." (Practitioner Triceratops)

All of this suggests that there may be a broader problem of how to engage those who aren't already keen, and whether forcing them to attend is the only way to capture those who may be unsure. To corroborate this, teacher Plesiosaur notes that "If it's part of a lesson that they have to attend, then the young people will be there. But sometimes if it's not part of a lesson, if it's in break or lunchtime, you might get nobody there."

When asked how this issue can be tackled, most practitioners answered that teachers within partner schools were the best way to push students towards signing up for events, with practitioner Allosaurus stating: "We get at the teachers as gatekeepers, and we get them to push with students they think will benefit the most from the opportunity," demonstrating that involving schools in assessing those WP students most likely to gain from WP interventions might mitigate the lack of choice.

One difficulty raised by practitioners with individual sign-up events is that the increased ease of joining for pupils may mean that they are less committed to participating in the session. "Online sessions gives students the flexibility to join from home without impacting their day very much, however it is very easy for students to sign up to an event and then not turn up as there are no consequences to doing this," said one practitioner, while another commented that there was often "a core of students who attend everything, with a much larger cohort who drift in or out, or who sign up to sessions but do not attend". However, this can also happen with in-person events, and if it does there is a greater cost implication to the provider:

> "What's frustrating with live in-person is the drop-out rate – this hits harder due to expense. If people don't turn up online, you can still deliver good value for money. If they don't turn up in person, then it hugely increases cost per head."

An interesting perspective is that the 'convenience' effects of online delivery are overspilling into face-to-face, with negative effects. Practitioner Velociraptor stated that young people have become used to being able to drop in and drop out of online events with ease, and are now more than previously treating in-person events the same and hence causing problems with regards to cost and effort for delivery teams:

> "[Traditionally] the no show rates and dropout rates are much lower for in person events than they are for online events. With the caveat that... there is definitely a noticeable change

post COVID in the sense that now young people see in person events as webinars, so they can drop out at a day's notice.... It's fine dropping out for a webinar, they're used to that, but dropping out for residential summer school two days before is a significant financial cost to the university that we lose, but in their head it's the same which is a new dynamic for us."

Finally, there was a feeling among some practitioners that open events are actually more difficult to recruit for. Practitioner T-Rex stated: "I think with student sign up events is that you can't force them to be there at the end of the day, especially if they're online." Practitioner Triceratops stated that they are no longer doing open events at their university due to reduced attendance: "We don't run events online that are just open to anybody really any longer. We did it during COVID. And I think the demand for it is just decreased. So, we find we get a better attendance by targeting a specific school group where their teacher can bring them along and they have to turn up because of their teacher."

Impact of online delivery on different student personality types

Our review of the literature around online learning highlights the fact that students with varying personality types may engage and learn better with different teaching styles (Dodd et al., 2021; Jones & Lau, 2010; Kedraka & Kaltsidis, 2020). In an echo of this, our practitioner survey respondents noted that different personality types reacted to online sessions in different ways. Although there was a general view across many participants that sessions held in-person are better for pupils, there was an acceptance that this was not true for every individual. For example, practitioner T-Rex said: "[Online delivery] probably works for some students, but I think perhaps the majority it didn't work as well."

So which personality types might prefer remote delivery? Some respondents suggested that students who lacked confidence, or were suffering from anxiety, could benefit from online provision. "Online seems to be preferred by students who are more reticent [or] lack confidence," said one, while another added that online "feels inclusive of children who feel anxiety about attending events in person, crowds, noise, not knowing people etc".

However, there was a level of disagreement about whether shy students would benefit more from online or in-person sessions. One practitioner commented that pupils were shy to ask questions online, meaning that they probably got more out of an in-person session; however, opposing views were also expressed – "sometimes they can be quite shy in person".

Practitioner Velociraptor felt that shy or introverted students cope better in their home environment: "I think there are certain students and those that are naturally, quite introverted, I think often prefer the online content because they can do it from their own safe space at home and engage". However, another provider another commented that in-person there was the option to have smaller conversations with students "which can be impactful – especially for shyer students". Some felt that session design and skilful delivery could help to mitigate this; as one practitioner noted, "The important thing is to facilitate the less confident students at in-person events, by including without forcing to speak, ie, using eye contact and similar for affirmation and validation."

Confident pupils, on the other hand, were able to benefit from both types of sessions, and as previously mentioned, there was an acknowledgement that those pupils who were considered the 'keenest' were the most likely to engage online. Practitioner Stegosaurus stated that "a lot of time online, the cameras are off. And even when some people have the cameras on, it's the very keen."

However overall, the preferences of different personality types can be offered as a justification for the hybrid model of working; as practitioner Triceratops said,

> "I think the key is probably to provide that range and to provide the option. So, you know [if] they want to come to something in person, come to an open daytime, come to a campus visit. If you wanted something online, you know, here's a mentoring program. Here's an information session."

Ability and willingness to ask questions

The importance of pupils being able to ask questions in WP sessions was a subject that was raised repeatedly in our data, by both practitioners and school staff. We examined whether there was an advantage to any delivery mode in prompting questioning behaviour.

Several of our teacher survey respondents mentioned the opportunity to pose questions as a key benefit of in-person delivery:

> "Our students enjoyed the activities more when the session is delivered by a visitor, they seemed more engaged and asked more questions."

> "It is more flexible online but more personal in person as students can directly ask questions."

One highlighted difficulty with different remote delivery types; in a pre-recorded video session, "there was no opportunity to ask question which meant it wasn't 'meaningful'," while in a live online stream, "Although students could ask questions they had to go through the teacher. There was no chance to build a rapport." This has been echoed by others with some respondents saying that pupils are less likely to ask a teacher to type their questions than they would be to ask it themselves in-person.

Teacher Plesiosaur also mentioned that the confidence imparted by the familiarity of the classroom situation could help to spark questioning. "[Teenagers are] confident within their own little groups... But the confidence with new people is not really there. But if it's in a classroom setting, they've got their teacher, they've got their peers, you will get the questions."

Other teachers also mentioned the reverse situation, where the person delivering the session asks the class questions. One mentioned sessions that were "pretty dry… not really posing questions for students to consider and follow-up", while another suggested that in an online session, "the opportunity to ask questions that engage the students may be missed". The feeling of a two-way process was encapsulated by a respondent who commented that in an in-person session, "Students and deliverers were able to ask and answer questions. The session was more interactive and there was a chance to build relationships."

Practitioners also generally felt that the in-person scenario was more conducive to asking questions. "I have noticed that students seem to ask more questions in the Q&A at the end of sessions when in-person, even though they lose the anonymity [of the online experience]," said one, while another added that "Students are more likely to ask you questions if you are there, rather than asking a teacher to type a question in Teams."

However, as with many of these issues, there were respondents who held the opposing view. One practitioner, for example, felt that: "The engagement is greater in-person, but there tends to be a larger section of the audience who remain silent during in-person sessions." Furthermore, some practitioners felt that online delivery actually helped to prompt questions from participants.

Practitioner Velociraptor, for example, stated categorically that online provision prompted a larger number and more varied questions due to the illusion of anonymity, so much so that this is now being combined into their in-person sessions:

> "If you're purely thinking online, you will get much more questions than in person… what we've moved to for a lot of our in-person ones now is putting up a QR code so they can scan it and type as a question which they seem quite confident in doing… nobody's ever confident in asking a physical question out loud verbally but online allowed for many more questions to be asked. I think young people are very confident to ask a question, especially through the chat box, for example because it's almost anonymous. It has their name attached. But it's as anonymous as they can be and often ask some more challenging questions than they would have the confidence to ask verbally in a big room."

This was echoed by practitioner Diplodocus who felt that "it's very much quite a protective, quite a safe zone for them to go into. So therefore, they're less inhibited to ask questions". They added: "If you've got WP students who are logging in, say virtually from their own laptops at home where they have access to like things like a chat function, you're more likely to get students asking questions and engaging that way because they're less intimidated."

Impacts specific to low-participation groups

Although most recipients of the WP activities discussed in this report will be target students, many of the findings could apply to school pupils across the board. However, some practitioners and teachers highlighted impacts which they felt were specific to students from low-participation groups.

Whether moving sessions online causes an extra disadvantage to WP groups is a key question. Teacher Megalodon believes that pupils who are less engaged will be even less so in an online session. "There's a bigger differential, I would say… with the person in the room, [if] you've got someone who's perhaps particularly interested or someone who might be challenging, you can raise that with the facilitator in advance and say, would you do me a favour, make sure you point questions at this kid, or just really keep an eye on this kid because they might zone out." Without that personal interaction between teacher and practitioner, those pupils can end up forgotten. He points out that the hardest to reach pupils are, by definition, difficult to engage; "The ones who will switch off if you give them a nanosecond… they're the ones you want to hit. And this is why I'm such a staunch advocate of in-person activities, because you can engage with that individual."

As mentioned elsewhere, our strongest online supporter among school staff respondents, teacher Plesiosaur, was keen that campus visits should continue in person, particularly for WP students. "The visiting of universities does really make an impact on kids who've never had that experience built into their childhood," she said. This was particularly the case for the most disadvantaged, such as care leavers or young people who are NEET[1], for whom she advocates that most provision should be in person. "If they are actually NEET, I would rather they were actually getting face to face [provision]… For these young people, I think it is slightly different." Survey respondents overwhelmingly agreed on the value of campus visits for WP, although one participant from a very venerable university commented that "being physically present in our institution can sometimes be overwhelming or intimidating to some".

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[1] NEET (Not in Education, Employment, or Training) is a UK government classification referring to young adults.

Among practitioners there was a general feeling that, particularly for WP students who may need more convincing that HE is for them, being face-to-face was better.

> "Students quite often benefit from having someone from university stood there in person talking to them. It gives them that that kind of feel for the university and a feel for the staff." (Practitioner Diplodocus)

Practitioner Stegosaurus, from a selective university, stated that it is very difficult to get WP students to envisage applying at all, and that events being held online are likely to alienate them even more: "I think people have a very… stereotypical image of what they expect us to be. And it's a lot easier to break that down in person when you go in and they see you as a person and you can interact with them as people. Time and time again we hear from our students that, you know, that's why we've applied. That's why we made that application – because we'd met those students and they were normal."

Some survey respondents were also especially concerned about the potential impact of moves online on WP target pupils. These mentioned that online provision increased the difficulty of reaching non-typical students, particularly among those who didn't self-nominate for sessions; one respondent commented that "Our in-person WP is really the heart of what we do. Removing this would really undermine our WP work."

Another practitioner was particularly concerned about the most difficult groups to engage:

> "I think that we would risk losing or a loosening of contact with some of our harder to reach groups. [For example] I do outreach at colleges who cater for adult returners who often have had very difficult life experiences, many of whom are not in a position at that particular point in their lives to engage online. Rather many are just getting to grips to returning to education and do not have high levels of IT skills or confidence or even the devices that would be needed."

There were some positives to online provision in attracting WP students, however. One university WP department found that when trying to include participants from diverse backgrounds, online delivery gave them opportunities previously denied them by geography. Practitioner Triceratops stated that "Programmes [for example] where we're looking for students who are from Black, Black African, Black Caribbean backgrounds, we have had to do online, because we simply can't reach the students that we're looking for [with] in-person delivery… The makeup of [the area] is not ethnically diverse enough to support a program of 50 students who are interested in coming to [our university] to do workshops." Practitioner T-Rex also mentioned these benefits when working with smaller target groups: "So if we're working with care leavers or those from military families, there might not necessarily be a lot of those students from one particular school, whereas if we can hold an online event for all of the schools in the county online, then it just makes sense to do it that way."

This was also true for groups or individuals with additional needs, with practitioner Velociraptor stating:

> "We've had young people this year reach out to us asking what online stuff we're doing because of disability or travel options and stuff like that… [the situation] is very different than in 2018/19 it would have been: 'You can come to campus or that's it. We can't really provide an alternative.' So that's probably increased our practice and made us a bit better than we were – more inclusive – than we were before."

There was, however, some concern that moves online could mean that events end up being less targeted and accessed by a greater proportion of non-WP students. Speaking about larger, non-specific events held online, practitioner Velociraptor mentioned how difficult it is to specify which students that schools should include:

> "It's a hard conversation to have with schools, because if you're bringing a school group to campus, there's you can give quite clear reasonings why it's got to be a certain cohort and then certain number of students. When you're doing a webinar, it's really hard to argue and reason with them that you don't have capacity issues or finance issues or anything like that. So why can't – from their perspective – why can't you open it to everybody really?"

This was backed up by another university representative, practitioner Diplodocus, who stated that whilst for in-person the vetting was strict, it was not the same for virtual delivery: "Some of our campus events before when they were WP focused, we would ask for things like post codes and stuff to make sure that students met the WP criteria. Whereas when it's virtual, we tend not to do that quite as much."

Influence of session type and design

When we asked practitioners what types of activity were going to be staying online, a huge range was cited, including but by no means limited to assemblies, finance workshops, Q&As, introductory sessions, live talks, mentoring and taster sessions. But how can the design of such sessions be optimised for online delivery? As mentioned in the introduction to this study, much of the literature on online learning is concerned with effective session design (eg Dodd et al., 2021; Farrell et al., 2019; Longhurst et al., 2020; Mphahlele et al., 2021; Rainford, 2021) with evidence that remote content should not be the same as that delivered in person, but should be adapted to make good use of technology, be interactive and responsive, and include practical activities. Our surveys with practitioners and teachers revealed a range of strong views about how sessions could be designed to make them more impactful, and conversely what did not work.

Knowledge and factual information

Several respondents commented that online delivery techniques were best suited to sessions where the primary aim was to relay factual information. The success of different types of session was summarised by practitioner Velociraptor who said: "The knowledge-based ones are probably better online. Anything around confidence or interaction or experience is seeming to fall better naturally towards in-person stuff," and "anything that's pure information… is easy and you can translate that content. Anything that has an ounce of interaction or a task to go away or any sort of engagement at all, you need to completely rethink to do it online because simple things like 'hands up' to answer a question [is] a lot more difficult."

Similarly, where an in-person session is designed to be purely informational, or to provide a light-touch introduction to a large group, some practitioners felt that these could be better delivered online. "Some things (short talks etc) were much better and got a much better response online," said one, while another commented that "Our simple information and guidance sessions have worked well online, and we intend on including these as option going forward."

One potential benefit of pre-recorded content cited by practitioners was that informational sessions, for example, IAG videos, could be watched multiple times to refresh knowledge, a possibility which was also mentioned by our pupil focus group. Whether this actually occurs is another question.

The necessity of ensuring that online sessions are interactive was mentioned frequently by our participants. In general, teachers said that live online sessions should be "interactive" or "activity based". Teacher Megalodon agrees with this; an interactive experience is "what makes the kids listen," he says. Linked to this is the necessity for a session to be quick to grasp pupil attention. "I think the ones that want to engage [with the session] do, but the majority can be quite disengaged with it if we're not able to grab their attention quickly," was a typical comment, with another saying: ""It needs to grab their attention immediately and give them ownership."

A lack of sufficient interactivity in previous provision can be seen in responses to our teacher survey, where participants made several comments on the effectiveness – or otherwise – of online activity design. This was a particular issue with pre-recorded videos, which might be "too general" or "pretty dry" but was also raised in relation to live online sessions: "The presenters just weren't engaging enough [and didn't use] enough props and visuals to engage the students." Teacher Megalodon suggested that ways to improve interactivity could include examples such as ensuring schools are given physical materials related to a session beforehand, to improve pupil engagement.

It is not clear, however, that all providers are aiming to improve interactivity of sessions. Practitioner T-Rex, for example, commented that: "With online activities you're more likely to do things the same way for all of the activities, whereas with in person activities you're you know, you're probably more likely to mix it up and do different kind of exercises and different kind of things to get kind of that engagement."

There was also some discussion about the amount and type of content that could be included in remote sessions, with some practitioners feeling that they would have time to deliver more content, while others were concerned that sessions might tend to be a bit 'samey' in terms of content delivered – "a lack of differentiation," suggested one.

Despite a clear preference for interactivity from teachers and many providers, there were some dissenting voices among practitioners. Triceratops made the following comment, suggesting a dissonance between thoughts and actions on the part of pupils:

> "A lot of students say that they want more interaction and more things to do, especially when you're online. But often when you try to get them to do those things online, they don't want to participate… [People say] they want something to interact, something to engage them. They don't want to be, like, forced to say anything, though, they don't want to be forced to turn on their camera and they do not want to be put in breakout groups – they don't like that at all online."

This was echoed by practitioner Allosaurus: "I think it can be really contradictory and a lot of students say that they want more interaction and more things to do, especially when you're online. But often when you try to get them to do those things online, they don't want to participate."

Planning and preparation

Some of the issues raised above could potentially be dealt with by better preparation, but there were several comments made suggesting that it took a lot more work to prepare a live online session that would be as impactful as one delivered in person. "More work and effort needs to be put in so that it is possible to have a good level of engagement and make the session successful," said one respondent.

Teacher Plesiosaur stressed the importance of effective session design and engaging delivery in making online sessions work. "I think it's another item that you can add to your bag of tricks if it's done well," she said. "If it's engaging, if it can be participative and [staff have] the confidence to do that… then it does work." However, she repeatedly used the term "skilful" when talking about how remote provision can be effective and thinks that getting such sessions right takes a lot of effort and planning. "You will need to use or enhance certain skills that you may already have but may not have used in quite the same way in a face-to-face class," she explained. "You're looking at someone who really can deliver and engage with an audience through a screen." She stressed the importance of interactivity, materials, visual communication and group work in sessions, which is harder to manage remotely: "It wouldn't work as effectively unless you were brilliant at delivering online."

Overall, there was a feeling that future online delivery needs to be well thought out, rather than kept for the sake of it. Practitioner Velociraptor said: "There's that fine line between doing what's useful online and doing what's token online so that you can say you've done a bit of online, and you've done a blended model and, in some cases, you just do that for the sake of saying it." This was echoed by teacher Megalodon who worries about the impact of online sessions. "I'm a very staunch advocate of in person things because I hate doing things to tick a box and sometimes, I feel putting the video on it will tick the box, but what impact has it actually had, you know, and then if it's having limited impact, why are we doing it?" he asks.

Megalodon is, however, somewhat optimistic that delivery will improve: "I hope over time we'll find that sweet spot where [sessions] are interactive, as well as they can be… As time goes on and the external providers are trying [online delivery], if they're sitting there bored out their tree on their end of the webcam, hopefully that will make them reflect on that, 'I need to do something about that'."

Mentoring
One area where some practitioners had seen genuine benefits to remote provision was in the area of mentoring. One practitioner described their "huge success" moving a pre-existing mentoring programme online, saying that "engagement has been much better (less distractions and better behaviour compared to classroom setting)". Another practitioner gave a different rationale for the success of this type of intervention: "It is flexible online, and some learners are more honest on a 1:1 basis when communicating via a messenger-type platform." As with many aspects of this study, however, there were others who took the diametrically opposite view, feeling that mentoring was one activity which should definitely continue in person.

Best practice for pre-recorded content
As noted in previous sections, pre-recorded videos were rated as the least preferred delivery method by practitioners. However, they can be useful for purely factual information, and provided schools with more options; as practitioner Diplodocus notes, they give WP departments "the ability to record sessions and reuse them, that's giving them [schools] a much wider range of things that they can use".

In general terms as to what might constitute better practice, teachers felt that videos should be "Short, snappy and to the point," or not more than 10 minutes in length – echoing findings cited in our review of the literature (Bao, 2020; Rainford, 2021a).

Some practitioners also noted that with careful choice of content, videos could bring something new to provision that had not been available previously. Here, for example, is one interesting possibility: "[We valued] having current university students from WP backgrounds pre-recording their stories

about journey to HE and what it's like to be student. This added another layer that we could not always deliver if we were to run in school presentations."

There were also a few instances where practitioners reported having made creative use of technology to deliver a different experience to young people; for example, one reported: "I created an interactive pre-recorded subject taster workshop, where learners would click different YouTube links to navigate their own journey through the taster."

Best practice for live online content

There were a number of benefits to live online delivery cited aside from those of convenience; for example, as noted above, some practitioners actively preferred it for mentoring sessions. Another plus point was the ability to provide content from relevant outside speakers who might otherwise have been difficult to schedule for in-person delivery. Suggestions included:

- "Employer/pathway talks – [it's] easier for employers/academics to commit to delivering online."
- "…the careers team/skills team are much more capable of offering their time up when it's only virtual and they don't have to traipse out to a school".
- "Individualised activities such as engaging with employers that would allow more scope for students to chat to people from all across the world, UK and different sectors, to help achieve insight into organisations and sectors that may not be accessible in person."
- "Subject specific sessions where multiple speakers join from different locations ie, a range of university lecturers."

As with pre-recorded content, there were instances where the use of technology, when carefully designed, could enhance a live session. For example, one practitioner told us: "The polls on Zoom are useful and work well online, much better than post-it notes. Also using Google docs works well, and discussion boards too." Another suggested that online could facilitate "a potentially wider use of media for a more thorough learning experience", while other examples of use of online formats, such as ease of forming breakout groups, were also mentioned.

Planning and preparation to ensure an engaging and interactive session are key, as mentioned earlier; in addition, it is important to remember that good in-person presentation skills do not necessarily translate to the online setting, and it may be necessary to address any deficits that arise in this area through practice and training.

Sessions that need to remain face to face

Generally, it was felt that some sessions are impossible to replicate online without reducing the effectiveness of WP for pupils. For example, practitioner Diplodocus noted that some sessions require equipment: "…things like labs and engineering workshops... The face-to-face stuff gives them that access to stuff that they wouldn't normally get at school, and you can't replicate that virtually at all." This is similar to what was noted within the literature review, whereby practical sessions may not be possible online due to the requirement to use specialist equipment (Mphahlele et al., 2021). This problem is exacerbated by increased session sizes online, making interactivity difficult. Practitioner Diplodocus said, "we could be talking to 250 kids and it's pretty difficult to deliver an actual hands-on workshop where they can actually practice those skills," suggesting practical elements are lost when moving away from face-to-face delivery.

A frequently raised activity that could not effectively be replicated online was the campus visit, which was rated as an important aspect of WP. This echoed findings from a previous study

conducted for Future U (Canovan & Fallon, 2021) which found that campus visits were seen by school staff to be of particular value for WP activity. Practitioner T-Rex summarised: "In terms of the campus visit and students actually getting on to a campus and seeing the university and [imagining] themselves in a university students shoes, I don't think you can replicate that online… it's something which needs to be seen in person and needs to be experienced there."

Impacts of moving WP activity online on school engagement

As well as the impact of remote WP interventions on individual pupils, it is important to consider the consequences for schools and teachers, which we address in this section.

Availability of sessions

We have discussed the fact that online provision allows practitioners to reach more pupils; the corollary of this is that it can enable schools to access greater numbers of WP sessions. This occurs through a number of mechanisms: the ability to stream sessions to multiple classes at the same time, increased ease of making arrangements, flexibility of access, and fitting activities into complex timetables. One practitioner commented: "Giving the option of virtual sometimes means that schools are able to fit in our sessions around the school day (and the same session can be streamed to multiple classrooms), thus they are able to make more bookings with us."

For some schools in remote areas, this trend has been particularly beneficial. Teacher Plesiosaur, for example, who is employed in a geographically isolated town, notes that their pupils were able to access provision from institutions that would not previously have been an option:

> "By having online delivery you could get a university in, for example, that were quite a long way away… Face to face is great, it does offer a range of support that you don't get online, but if you do the online work well, and I certainly saw some very good online delivery from arranging universities, and then you're also adding a layer that works for the university [and] the schools and colleges."

Plesiosaur also notes that the young people in her town are "not the confident travellers that, say, they would be in the south of England," which is an extra barrier that can be at least partly overcome through online provision.

A similar benefit may be experienced by schools who have small numbers of target students; the cost/benefit analysis of working with smaller groups changes, meaning that, for example, a school with just a small relevant cohort might be able to access content that would not previously have merited a member of staff travelling to them. For example, practitioner Stegosaurus stated that "you could go meet with one kid somewhere and a teacher and it would be absolutely fine. That would be perfectly valid hour of your time".

However, the experience of increased availability is not universally beneficial to schools. As well as the preference of teaching staff for in-person provision, the removal of geographical barriers may have been a cause of overwhelm for schools and careers leads deciding which programs to host for their pupils. Practitioner Stegosaurus said they had had conversations with schools who were no longer signing up to online events because there were "like 100 universities throwing things at them. And they were just like, we don't know what to take here because suddenly those barriers were down. You didn't have that geographical constraint on anything."

School needs and preferences

As mentioned previously in this report, both teachers and practitioners expressed a general preference on the part of schools for in-person provision. A frequently expressed sentiment was that schools had been positive about online delivery when it was the only option, but that face-to-face was now preferred. As one respondent noted, "During the pandemic it was the only form of WP activity we could offer. So, we saw a surge in requests. However, almost universally (though not entirely) with the restrictions lifted, many school contacts have reverted back to a preference for in-person activity."

A variety of reasons for this preference were given:

"In person delivery seems much easier and convenient for the schools."

"Schools… want to give their students these in-person experiences."

"In-person activities are generally more engaging/interactive."

"In-person activity is what the schools want and are asking for. In most cases staff are willing to wait/postpone activity to ensure that it can happen in person rather than virtually."

"In-person is the preference and is considered more impactful by the schools."

Meanwhile practitioners noted that strong relationships with schools and school pupils in-person can make it easier to match content to their precise needs, something that may be missing in virtual delivery. Practitioner Velociraptor said:

"The material we deliver in online sessions is much more generalized than if we have a strong relationship with the school come into campus. We can tailor our sessions to exactly match what their needs are, and particular sessions or a particular group. Online, you're effectively throwing the same generalist content at everybody because you don't know what they need exactly."

In general, practitioners reported large variations in school attitudes to online engagements, reflecting the complexity of the factors involved. This is perhaps unsurprising; as mentioned in our review of the literature, previous Future U research has found that schools often benefit from an individualised approach when it comes to WP provision (Canovan & Fallon, 2021). However, while some reported that feedback was similar for remote delivery as for in-person, or that schools preferred online for some session types and in-person for others, these individuals were in the minority. In total, around two-thirds of practitioners stated that schools prefer face-to-face sessions.

This finding is borne out by comments from our small teacher sample. As discussed elsewhere, school staff in our survey were clear, not to say vociferous, that in-person sessions were more engaging and impactful for pupils. Some respondents did comment on the convenience of online delivery, but frequently in caveated terms:

"It is more flexible online but more personal in person, as students can directly ask questions."

"Online can hit more students and [is] sometimes easier to organise. In person has more impact."

Many practitioners also expected that an increased emphasis on online delivery would lead to lower engagement from schools. "I feel like schools may be less focused on factoring us in if it's just a video

as it is easy to be forgotten about," said one respondent, while another commented that schools would "probably be less engaged with the activities as a whole – go elsewhere for their outreach work".

A couple of respondents to our teacher survey made comments which seem to support this finding:

> "I'd be disinclined to run them if there was a choice from another provider who was in-person."

> "We would simply stop booking them. I can't justify taking them out of lessons to watch a video or listen to an external speaker that isn't there."

Teacher involvement and attitude

In terms of the attitude of individual teachers, there was again a variety of views among WP practitioners, with most feeling that teachers preferred in-person delivery but some taking the opposing view. "Most teachers comment on their preference being face to face," noted one participant, expressing a common view; many respondents noted positive affective responses from school staff for in-person delivery, such as references to increased enthusiasm.

However other respondents cited online provision which had received good feedback from individual school staff members, and there was a recognition that there were certain convenience factors, for example where trips would otherwise have been necessary: "For some schools it [online] works well as it means less travel and resources in terms of staff not having to go out of school." Elsewhere, practitioners stated that although staff preferred in-person activities they were happy to get involved in online programmes; however as mentioned elsewhere, others felt that online offerings were off-putting to staff. There was some suggestion, as elsewhere, of a trade-off between factors: "For students I believe generally face to face is better… For staff I think the offer of both is beneficial."

The role of the teacher as mediator to the session is one area which was impacted by online delivery. In general, there was variability in teacher involvement in online sessions; "Some [teachers] are very involved and keen to help out with different online functions, whereas others sometimes find it difficult to manage the chat and the class at the same time," said one practitioner.

This was sometimes positive, for example reports that teachers were active in helping with tasks; however, in other instances it presented itself as a barrier to interaction with the pupils during live online sessions. For example, there were several reports of pupils asking questions via the teacher, who would then write them into the chat, which raises potential issues of gatekeeping of pupil responses. As previously mentioned, some practitioners felt pupils were more likely to ask questions in person if the alternative was asking a teacher to type their question, although another commented: "They may be more willing to ask questions in person, yet they do this via the teacher, so are still forthcoming." Some WP practitioners, however, feel that teachers can sometimes directly block questions. Practitioner Stegosaurus said that "sometimes I've had it where [the chat function] has been done through a teacher, and they only pass on the questions that they want to ask," while practitioner Allosaurus stated that "It was always a question that we wondered – how much is that stopping students from being able to freely ask us questions?"

Pre-recorded sessions may be designed to involve teaching staff having some input, and again their opinions reportedly varied on this point. "Teachers have been very positive about any pre-recorded content given… in relation to a teacher facilitating it, eg, playing the video to a class in a set time," said one respondent. However, another commented that "…we seem to see more challenges with

the pre-recorded content as teachers seem to see this as them leading the session (when in reality they just need to press play usually!)".

There are also a number of difficulties related to not having an opportunity to chat informally to teachers before and after sessions. As discussed elsewhere, feedback and evaluation can be more difficult for online provision, and the loss of informal feedback is problematic; "…teachers can't speak with you as they might if you were in the classroom physically – and they will not usually have the time to respond to feedback requests".

Teacher Megalodon described the benefits of being able to speak informally to a WP practitioner before a session, and the drawbacks of not being able to do so, in some depth:

> "…with the person in the room, [if] you've got someone who's perhaps particularly interested or someone who might be challenging, you can raise that with the facilitator…in advance and say, would you do me a favour… make sure you point question at this kid, or just really keep an eye on this kid because they might sort of zone out… But when [you're looking] at a face on the screen, [there's] the kid in the corner that they can't see just because the camera doesn't pan that wide enough or the quality of the picture is [poor]…"

Impacts of moving WP activity online on providers

Whilst the impacts on pupils, and to some extent teachers and schools, are the most important in evaluating the impacts of online WP provision, it is also the case that such changes in provision also have consequences for provider organisations and their staff, which we explore in this section.

It is worth noting that every WP team that was interviewed stated a willingness to keep certain aspects of their delivery online in the future, even if their overall preference was for in-person delivery. However, some were more or less positive about the impacts online delivery had had.

Staffing issues

We asked practitioners to tell us about the impact "on you and your department" of moving WP activities online permanently. We did not specify what proportion of interventions this would refer to, and some respondents assumed that all activity would move online. Those who did so tended to view the prospect negatively, even apocalyptically, with one commenting: "This would not work for us, the fact that we knew online provision was time limited made this bearable." Others said such a move would be "damaging for team morale" and that "practitioners weren't employed to deliver through a screen".

When we consider the overall tenor of responses, including those who assumed that hybrid provision was under discussion, a more nuanced picture emerges, with benefits and disadvantages of such a move both emerging. It was felt by more than one of the practitioners that the move online was inevitable and that the COVID-19 pandemic merely accelerated this. Practitioner Velociraptor stated that "it probably pushed us to do stuff we would have probably done in about five years' time anyway," suggesting that issues faced now would also become inevitable in the future.

Some respondents suggested that a permanent move online could impact staffing levels at their organisation, with one warning of a "potential loss of jobs, as fewer people would be required to prepare recordings/deliver online sessions". One practitioner stated that this had already happened within their department, with a reduction in numbers of staff and plans to recruit being scrapped, stating that "we don't need that extra person" as online delivery was more efficient.

The reverse case was also raised, with some respondents suggesting that too great a proportion of online delivery would lead to staff leaving their organisation. One participant also suggested that the type of staff hired might change with the shift to remote, saying "I think some of my less tech-savvy colleagues might struggle, but there would be more opportunities for those comfortable with the online platforms". Ease of recruitment, meanwhile, could benefit from the offer of remote working.

Job satisfaction and work-life balance

In general, a move to a hybrid model was viewed positively from the perspective of staff working conditions. Staff would have "more freedom to choose between working in the office and working remotely from home," and "Work-life balance would be improved because of easier scheduling," said respondents. Practitioner Stegosaurus, for example, felt that physically going to schools meant "spending a lot of time on the road, spending a lot of time away from home," and that "we've all gained a lot more time in life".

However, there were a few dissenting voices; one practitioner, for example, said: "[I'm] not sure how this will impact on workload, as we are already struggling to juggle the mix of in person and online content." Interestingly Stegosaurus, quoted above, also mentioned the shift as causing negative productivity: "I lost that downtime in between things. [There was a] temptation to put something in at 9 o'clock, and something at 10:30. and then it all blurred into one and I'd be halfway through a presentation, I'd be like, haven't I said that?" implying that this saturation is also affecting the ability to deliver sessions effectively. Interestingly, teacher Megalodon in their interview expressed concern about the impact of moving online on WP delivery teams, who were imagined as "bored out of their tree on their end of the webcam".

For some the improvement in work-life balance is not enough to sway them towards even a hybrid model, with the overall effect of in-person delivery being better for them. Practitioner Allosaurus said:

> "I remember when we moved to virtual and I thought yes, that's great. I can just do it in the comfort of my home, or I don't need to travel to X amount of schools all week and sit in traffic. So initially it was a breather, and it was easier, but I prefer it [in person] – it's more enjoyable to do face to face. You get more out of it and it's more purposeful."

Many expressed a wish to return fully to face-to-face delivery. Practitioner Stegosaurus felt strongly about this: "I just really miss it. I think for me that's one of the best things about the job is that visiting lots of different places and seeing lots of different people, and I just don't feel I get the same online."

Additionally, there was a sense that aspects of the role might suffer, particularly in the area of relationship-building. Whilst the detrimental effect of this on pupils and schools is discussed elsewhere, practitioners also felt that it would have a negative impact on them as individuals. "Personally, I would feel a lot more removed from the pupils I interact with," said one, while another commented that there would be "less opportunity to network in real-life and have those smaller, and often most rewarding, conversations with students." Working online was "less fulfilling," said another respondent.

Online champions and online dissidents

A few respondents had very strong feelings about online delivery methods and are what we have termed 'online champions and dissidents'.

There were a handful of participants who saw significant benefits to online delivery and felt that school attitudes were lagging behind. These 'online champions' were staff who placed a particular value on environmental sustainability and/or disability access. In some cases, there was a sense of frustration that schools were not making the most of the possibilities of online delivery:

> "I do not believe most schools are taking advantage of online provision to maximise in-person time with us."

> "School leads don't usually attend [online interventions], or much less so than for in person sessions. I wonder if this communicates a message to WP students about the import and value the school places on this sort of session? Not sure, but a factor to consider."

One participant felt that the preference for in-person sessions was based on a form of nostalgia, rather than a logical view of the costs and benefits of online provision:

> "While people often express their preference for meeting in a physical location when they attend online events, their responses during and after online events indicates that there is not much difference in feedback, though participation seems slightly inhibited. I believe people associate online events with COVID restrictions and it has formed a negative association, so that people are already nostalgic for pre-covid behaviours, but when discussed explicitly people can recall the disadvantages of meeting at a physical site, the inconveniences of travel and lack of space, time pressures and so forth that are not present for online activity."

A somewhat larger group of around 10% of respondents, however, were what we have termed 'online dissidents'. These were respondents who were strongly opposed to online delivery or saw it as very much inferior. These individuals were likely to state that there were no circumstances in which online delivery methods could be 'better' and made comments such as the bald statement that "Face to face is better". This group was also very negative about there being any role for pre-recorded video in WP delivery:

> "I won't ever do pre-recorded again because you don't know if the students are listening, and you can't monitor how engaged they are."

> "Our experience is that few to no students engage with recordings of sessions or skip around it and miss content."

The attitude of this group is summed up by one participant's comment: "I would be strongly against keeping things online. It's clear that young people, and teachers, prefer face to face and that they get more out of face-to-face delivery."

Ability to engage with a greater number and variety of schools

Some practitioners cited the ability to work with a greater number and variety of schools as a benefit of moving to online delivery. Indeed, some mentioned their delivery has increased overall, with practitioner Triceratops saying: "We're running at a normal capacity for our in-person delivery and then we're doing online delivery on top of on top of that."

Increased geographical reach was one factor cited: "If schools are typically out of catchment and struggle to come in for insight days or uni visits, then there is still the option for exposure." This has been linked to increased applications from WP student; practitioner Diplodocus found that "our applications for WP students have actually gone up during the pandemic, but I think that's probably because we're able to reach a bigger range of students than we could before because with WP

students you're always going to be limited by the size of your team by the geographical area that you can cover."

As previously mentioned, some organisations run sessions that can be streamed simultaneously into multiple classrooms and/or schools, which clearly extends the reach of each intervention. For example, practitioner T-Rex "actually argued a case for doing an assembly virtually because then I could hit four classrooms at a time". Another way in which more schools can be engaged online is by providing a backup which reduces the likelihood of having to say "no" to requests: "Recorded activities are a good resource to send to schools if we are fully booked."

However, some practitioners highlighted that the removal of such geographical barriers can prove to be a disadvantage when considering how best to relate to schools and their pupils. For example, practitioner Stegosaurus stated that "a drawback when we're looking at sort of geographical areas further away is not necessarily understanding the area as well". By contrast, face-to-face delivery can be tailored to specific students and areas to make information more accessible to pupils.

Furthermore, there was some understanding that the close relationships that departments have built with local schools was not possible when conducting virtual and geographically distant programs. Practitioner Velociraptor said: "If we pull a list now of all the schools we interact with through webinars and online, the list will be vast in terms of the number of schools. But often… the relationship isn't there in the same way that it would be in a school relationship we have with the local school who's coming on to campus." This was corroborated by practitioner Stegosaurus, who said: "I know I've been there on a presentation, but I don't remember anyone and that's not helpful either on building those bridges for the future."

Whether or not the WP organisation would be able to realise the potential benefits of hybrid working is another issue raised. One respondent commented that "having a virtual/online relationship would damage existing relationships with schools and students – thus impacting connectivity between School-FE-HE". Another explained the potential difficulties that could be faced in more detail:

> "We would certainly save money and time, as I would no longer travel distances to visit schools – [but] in total honesty I'm not sure I would work with more schools, even though it's logistically easier. I've found it quite difficult to get schools to respond to offers of online sessions – perhaps partly because there's no deadline? Whereas if I tell them I am only in X county for one week, this forces them to respond and organise things if they want me to speak to students – I don't feel I would be able to connect/build relationships with teachers."

However, it is worth noting that whilst the loss of in-depth relationships between WP professionals and schools was acknowledged by almost all of our respondents, some felt that this wasn't always a concern. When asked about whether trying to engage a wider number of schools reduces the depth of relationship possible, practitioner Triceratops stated that they "think a lot of the schools that we're touching on, maybe are schools that we wouldn't be looking to actively build a relationship with", implying that some interactions are preferable at surface level for increasing awareness of university and post-education options.

Furthermore, there was a feeling that in the future, online events across universities, particularly large open events, may lose their WP focus entirely. Practitioner Velociraptor stated that their university would like to combine WP and recruitment events to reach an even wider audience:

"There was some discussion around combining some of our online events. So, our targeted student recruitment events that are going out to independent and private schools, could we also… open our WP events to those schools and there's a lot of nervousness around that cause naturally a lot of WP students are a bit more nervous, a bit more unsure, want to ask some questions about the university. If they're being overshadowed by these students who know exactly what they want, know where they're going, know to ask all the complex questions, and it could actually have a negative impact on the students we want to work with because they're almost scared off by these other students."

Evaluation

The ability of WP practitioners to effectively evaluate the impacts of their sessions after moving them online appears to be a problematic topic, with most practitioners feeling that online interventions made it much more difficult to properly track pupil learning. This is evidenced by the number of 'don't know' responses we received when asking about the efficacy of online provision.

The starting point for this aspect of the discussion needs to be that WP provision delivered by any method is often imperfectly evaluated, as found in a previous study by the lead author (Canovan & Fallon, 2021). The comparison for evaluating online provision is therefore a fairly low base. However, a number of additional problems were cited in assessing the efficacy for remote delivery; practitioner Velociraptor felt that for "a number of online sessions. It's just near impossible to gain anything useful", as well as "If a student comes or a school come to campus and have a fantastic experience. They really feel they need to tell us that, if someone comes on and has a really great webinar in reality and it's very rare they'll feed that back."

Furthermore, many practitioners mentioned that feedback was often gathered informally, for example from conversations with staff. As online provision provides fewer opportunities for such interactions, it is likely that evaluation of this type would suffer. In our survey, WP practitioners found pre-recorded videos particularly hard to evaluate or to evidence outcomes from, reflecting high numbers of 'don't knows' as mentioned above. This was due to low response rates to evaluation methods deployed, not being present to informally evaluate sessions, and in one case that the practitioner had assumed that the activity would have such a small effect that they didn't bother to evaluate it: "We did not provide evaluation for the prerecords as they were so low impact."

In general, it was felt that whilst short interventions virtually were valuable in terms of time, the evaluation of these was difficult to obtain, and not particularly helpful, especially in terms of tracking particular WP students through their educational journey. This may suggest that shorter one-off interventions are an added bonus for WP departments but cannot necessarily add their weight to effectiveness of wider WP goals. By contrast, in-person sessions were felt to be more easily measurable, although often this was also done by informal observations of how sessions were felt to be progressing, as well as the use of pre and post surveys.

Practitioners repeatedly stated that evaluation between online and in-person methods had not been compared, and that it was likely that decisions about future delivery methods would not reference evaluation at all. Practitioner T-Rex said: "I don't think evaluation would come into play in terms of determining whether an activity should be in person or online. I think we take the signal from the school over which method would be more effective and more realistic," suggesting that the general 'feel' for interventions might be more important.

However, many departments felt that they were not doing enough to evaluate activities and that in the future this needs to change, with practitioner Triceratops saying, "I think that's a sector-wide feeling of we know that we should be doing better, but we're not always sure how to actually make that come to light and how to put that into what we're doing."

Sessions delivered to adults

One area which seems to be less problematic to deliver online is sessions aimed at adults, particularly sessions for WP parents and CPD for teachers. The general consensus is that many adults have confidently handled the move to online working, and there is a great convenience benefit to them of an online session.

Some WP departments have made an effort to hold events that the parents of pupils can sign up for. This is often through schools, but onus is put on parents to register. This is important for WP as the influence of parents can be pivotal in the choices of school pupils themselves. Many of the WP departments who mentioned this are intending to continue to run these and are likely to keep them online for convenience. These events are usually held out of hours for WP professionals, meaning moving them online reduced the time they need to take out of their non-working hours when considering travel time, and as stated by one of the practitioners, Stegosaurus: "The parents want to attend, but it's so much easier for them online because they come in from work and they can be doing this whilst they're eating their tea, they don't have to come in and go back out again. And they could even be doing it back at the office if they need to."

Pupils' views on online WP provision

Hearing from pupils in their own words is an important aspect to assessing the effectiveness of online and in-person provision. As discussed in the Methods section, we encountered a number of difficulties in enrolling schools and pupils to this study. However, we were able to gather the views of a small group of young people about online interventions that they had experienced, and how these compared to in-person activities. We report their comments and opinions in the following section.

Tutoring survey participants

The first cohort was a group of young people who had experienced online tutoring delivered by students at the University of Central Lancashire during the pandemic. The tutoring was intended to help boost maths and English skills among pupils in years 7 and 8, but also to inform participants about university and their future options. In total, 12 pupils who had participated in these sessions completed our survey.

We began by asking participants how much they had learned from the tutoring. Half the group said 'quite a lot' with one participant said 'a lot' and the rest 'a moderate amount'. Nobody chose the other two options, 'not much' or 'nothing'.

We also asked, 'How do online sessions affect your learning?', a question which was not specifically about the tutoring but rather encouraged the participants to consider all online learning. The great majority of respondents, 10/12, answered that 'I learn the same'. These two answers suggest that, at least in our cohort, most pupils did not feel that learning was adversely affected by remote delivery.

We then asked whether respondents would have learned more or less if they had been able to meet their tutor in person. Nobody thought they would have learned less; seven felt they would have

learned more, and five about the same. Those who thought they would have learned the same ascribed this to their tutor's skills or felt "normal" despite being in an online setting. Of those who felt they would have learned more in person, some said that human interaction helped them to understand and remember information; others said they would have had better concentration or less distractions, while a third group felt it would have allowed them to ask more questions.

Asked whether they would have preferred to meet up in person, eight agreed but four preferred to have the sessions online. Those who chose the latter option said that they preferred online interactions in general, or that it was more convenient. Those preferring in-person cited similar reasons to that in the previous questions, around personal interactions and ability to ask questions, but also said that they would have liked to meet up with the other young people to bond and work through problems together. In terms of their relationship with the tutor, most of the group stated that they had been able to build a good rapport, although a few said this had not been the case: "Didn't really build a relationship as online is OK but it's not personable." Half stated that building a relationship would have been easier in person: "I feel like I created a pretty good relationship with the teacher, but it would have been easier if it was in person and not online."

We also asked this group about their comfort in asking questions during the online session. Most pupils – 8/12 – stated that they were confident in asking questions; a further three said they were only comfortable typing questions in the message function, and one was not comfortable asking questions in any format[2]. A lack of confidence was the primary reason that some respondents were not comfortable to ask questions verbally online; "I don't really like speaking out loud to answer questions so it can help to engage more if I don't have to actually speak at the same time," said one.

We then presented the pupils with a series of dichotomous statements and asked them to choose the ones they agreed with. The results are presented in Figure 4 (see next page).

It is interesting to note that there is no strong negative emotion towards online learning here; in fact, the majority of our small cohort would prefer it to continue to be part of the mix in future. In another set of statements, 10/12 respondents agreed that 'I like being able to access information from home'.

However, when we asked, 'How do you prefer to receive information about things like careers, skills development and your future choices?' 8/12 respondents chose 'From a visitor coming into my school', with the other four choosing either live online or pre-recorded sessions, showing that there is still an appetite for visitors to school. The responses to both in-person and live online provision underlined the importance of being able to ask questions:

> "[I want to be able to] ask direct questions and learn from others asking as well." [Prefer visitor]

> "So I can ask questions on things I am unsure on." [Prefer live online]

A further question asked students to describe what made a good online session. As with teacher and practitioner respondents, "interactivity" was a key theme; as one respondent said, "A good online session[should] include activities evolved around the work and interactions with other." An interesting point of difference with the adult participants, however, was that several pupils wanted the session to be "fun" or contain "jokes": "Has to have some humour which helps engage me."

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[2] Other available options, selected by no respondents, were 'Only with camera off', 'Only through my teacher', and 'I have never had the option to ask questions'.
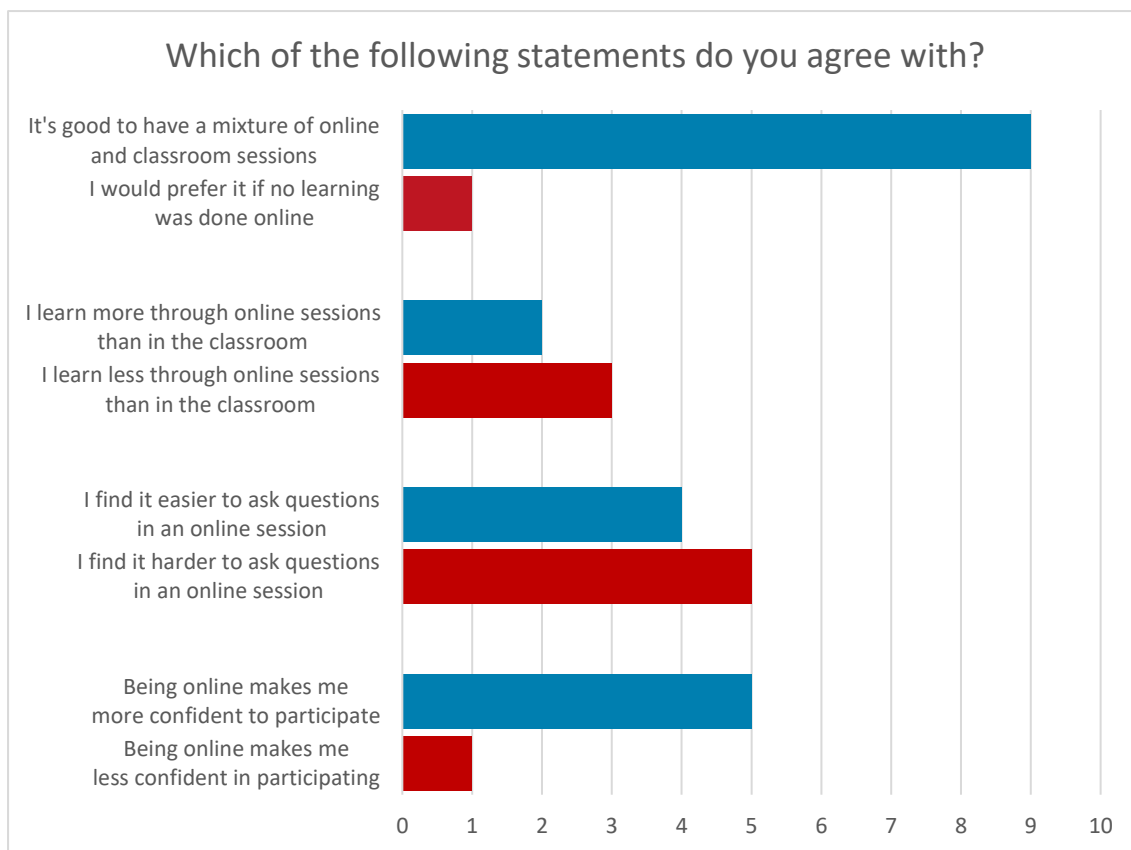
Figure 4: Pupil's views on session delivery

We finished by explaining to pupils that some organisations that provide information about university and future choices were considering retaining some online provision for logistical reasons and asking their view on that. There were two broad views expressed; some felt it was a good idea because it would offer an opportunity to more and different young people:

> "I think it is good because it means they are able to teach/tell more pupils about advice for the future etc. I also don't mind getting information from an online session."

> "A mix would be amazing because some children learn quicker online and some in person."

A second group felt that in-person provision would be more beneficial:

> "It's alright but prefer to talk in person so can speak to someone about my options and different choices about my future. It's a big, big opportunity for me and seeing someone in person would have an impact on me."

> "I think it is a good idea as it would take up less time for school and visitors but as I would go up in older years like year 10 and 11 it would be better to have visitors in person not online."

Focus group participants

We were also able to conduct a mini focus group in a girls' school in the North West of England. Three participants attended, whom we refer to as Pteranodon, Ornithocheirus and Archaeopteryx. The young women were in year 10 and had received WP interventions from a Uni Connect branch delivered both in person and via a series of pre-recorded videos.

When asked which sessions they had enjoyed more, all three girls opted for the pre-recorded videos. However, this was because they had found the topic more interesting than the in-person session,

and, as Pteranodon said, "It would have been better if we could have someone come into school, but it was also great on the video."

A key reason cited by the respondents for preferring in-person delivery was the ability to ask questions. Although the teacher had been involved in the session, providing further information and answering questions (thus highlighting the altered role of teaching staff where online WP provision is in use) the participants felt that having a specialist answering their questions would be more satisfactory. There was also a suggestion that more questions might have been prompted by an in-person session; Ornithocheirus commented that "I feel like when someone's in front of you, you're more prone to wanting to ask questions, wanting to know more, because you know that person will know the answer to your questions. But if it's just on a video, you won't be able to physically ask questions to the person on the video."

There was some discussion, however, as to whether asking questions might be easier in relation to a pre-recorded video. Asked whether it was easier to ask questions of a visitor or your teacher, Pteranodon answered: "Definitely of the teacher because you're more comfortable with them and you've known them for quite a long time compared to the visitor." Archaeopteryx agreed: "A visitor you don't really know, but the teacher, you've known for a bit, so you get comfortable."

We then asked the young women about the relative effectiveness of learning of the two delivery methods. In the following conversation, Pteranodon and Ornithocheirus agreed that they would retain more information from an in-person session:

> Facilitator: "Do you think you remember more from the in-person session or from the video session?"

> Pteranodon: "In-person, because on the video, you couldn't really see much hand actions, but hand actions really help you remember stuff."

> Ornithocheirus: "I think in-person as well, because I felt like I was more keen to do things because we were in action and we were doing things. So I think I remember that more."

Archaeopteryx initially agreed, but then changed her mind: "Well, actually, the video. Because if I keep forgetting [information], I could go back to the video." The girls commented that the videos had contained a lot of information – "overload", said Archaeopteryx – and Ornithocheirus also mentioned the need to rewatch: "I feel like when I watched the video, I didn't feel like there was a need to go back and watch it, because I remembered quite a lot. But as I think of it now, I don't remember quite a lot, so going back would be a good idea."

The participants cited a number of reasons that learning might be better in person; as well as those mentioned above, they felt that concentration would be improved:

> "Because on the video, if you're just staring at the board for a long time, then you might get distracted, or your attention span might decrease." (Pteranodon)

> "[With] the video, you can get lack of concentration, people could distract you, whereas the person in front of you, to then talk about the thing, that helps you concentrate rather than getting distracted from the other people." (Archaeopteryx)

In-person sessions were thought to be more engaging, particularly if interactive. Ornithocheirus had clearly got a lot out of the Uni Connect session that had been delivered to her class in person,

explaining that "It was quite fun to be in, like, the moment, and like the pressure that you've got and you've just got to work with the pressure." She felt that the interactive nature of such sessions helped with learning and recall. Another factor was the ability to discuss or debate a topic with classmates, which she felt might help to "change attitudes".

There was also social pressure to pay attention to a visitor; "…someone's right there, they can see what you're doing, so you want to make sure you look like you're listening," explained Ornithocheirus. Archaeopteryx thought this might benefit pupils who tended to be inattentive or disruptive: "…when a person is there to deliver what they have to say, they'd listen because they have to represent the school and stuff, so they've got to be quiet and be mature".

In general, despite preferring in-person sessions, the pupils in the focus group were open to learning via videos as well. Pteranodon said:

> "[Using videos] doesn't really harm… learning, but it restricts [pupils] from learning as much as they could have done in real life. So I think in-person visits are still a good thing, but the videos are still positive."

Ornithocheirus felt that the suitability of online delivery depended on the topic, with some lending themselves to interactive and/or physical sessions. The factual information they had received, however "was alright online because they just explained what it was and things like that and it was just like a teaching topic." However, this was not necessarily the case for her peers; "…you can just tell that people's attention spans are just like... As soon as you put a video on, they're like, 'Okay, it's time to talk,' or whatever."

For the reasons outlined in the Methods section of this document, we were unable to conduct our own RCT to directly test the efficacy of online WP interventions. However we do have some data on this point from another study conducted by Pathways, the East Midlands Uni Connect.

Pathways conducted a rigorous and well-designed RCT to test whether learning from an art-based holiday intervention was greater when the material was delivered online or in person. The week-long programme of activities was designed to both improve pupils' art skills and to inform them about higher education pathways and career choices. Participants were randomised to complete the course either by travelling to an arts centre, or online at home; content and course design were near-identical, down to being delivered by identical twins.

Sadly, given the potential benefits of such a study, recruitment proved very difficult, and some students opted out of the randomisation process, meaning that final comparable numbers were very small. While this means that no statistically significant results can be reported, the qualitative aspects of the intervention evaluation are illuminating.

The results suggest that, where an online intervention is carefully designed, it can generate similar levels of engagement and learning to an in-person activity. For example, participants were asked at the beginning and end of the week to name a selection of art courses and careers; at the end of the week, the online group demonstrated that they had learned about a wide variety of these, able to name pathways that they had not previously.

Students in the virtual branch described their experiences in positive terms, showing evidence of learning. For example, Student 9 noted:

> "[It gives you] something to kind of get thinking about and to kind of help with awareness of colleges and opportunities, and how other people see it as well, as in the sense of colleges and stuff. And you get to have the experience of talking to people who are in college or university and who have done the exams."

In addition, pupils in the virtual branch accessed a range of online content via a dedicated social media platform, which they described as useful in the evaluation. Those in the in-person branch were also able to access this but chose not to, indicating a potential missed source of learning.

Pathways staff noted that confidence grew across the whole cohort, with no difference perceived between the two delivery methods:

> "…from a Pathways staff perspective, students' confidence, interactivity, and quantity and quality of the questioning from students increased over the course of HTAC in both the in-person and virtual clubs. Evidence for these improvements took different forms and related to the delivery format, ie body language, socialising in breaks, showing of work for in-person students, and cameras on, sound on, participating in Zoom chat for virtual participants. However, there is no evidence from the staff observations that one delivery format is better than the other in terms of increasing confidence."

It is interesting to note that at the end of the week of activities, all participants were happy with the arm of the study that they had been randomised to. Taken as a whole, and despite methodological challenges, the results suggest that there is no reason to suppose that a carefully designed online

intervention would have inferior learning outcomes to an equivalent in-person programme for the cohort enrolled.

However, the last point is of crucial importance. The Pathways study suggests that for students who are motivated to join a programme in their own time, online learning can be just as effective. What is not known is the impact of virtual delivery on who signs up in the first place. Sign-up levels were much poorer than expected – it is possible that this was to do with the ongoing pandemic, but one cannot rule out the possibility that the randomisation of delivery modes was off-putting. Similarly, as Pathways notes: "What these findings cannot show is whether non-attending students did not attend because they were unhappy with their allocation."

It can therefore be said with some confidence that there is no evidence from this study to suggest that learning is inferior when motivated pupils participate in a well-designed online session, as opposed to one delivered in person. However, outcomes for those who may not be so interested or confident, or where programmes are less carefully constructed, remain in doubt.

Discussion

In this section we address in turn the research questions posed earlier in this report.

Are WP provider organisations planning to keep some aspects of their delivery online permanently, and if so, why?

The vast majority of the practitioners that we surveyed during the study stated that they were intending to keep certain aspects of their provision online, rather than returning to in-person for everything, and most of those had already made the shift.

A wide variety of reasons for this move were given, with most being practical in nature. The most commonly stated were cost and time savings, increased reach in terms of both geography and number of schools engaged, and convenience/flexibility, for example where scheduling is concerned. Other benefits were mentioned such as inclusivity in being able to offer a broader range of event types, as well as the ability to offer sessions for those schools and individuals who otherwise would not be able to travel.

However, these seemingly permanent shifts online take place against a backdrop of generally negative views as to the efficacy of remote methods for WP activity. When we asked both practitioners and teachers to rate the impact of different delivery methods on measures such as engagement, inspiration and learning, online sessions were consistently rated lower than in-person by both cohorts, with pre-recorded videos (ie asynchronous delivery) least favourably viewed.

Taken as a whole, our study participants felt that schools had a preference for in-person delivery. This was expressed both directly by our small cohort of school staff, and through practitioners' views of schools' predilections. Some quite strongly negative comments were made about online provision, with school staff, for example, stating that they would not engage in it any more or calling it the "worst-case scenario". Practitioners themselves often expressed a strong preference to be back in the classroom, mentioning factors such job satisfaction and impact, although a few, for reasons as mentioned above, championed online delivery.

In any case, the perceived benefits of remote provision in terms of logistics and increased reach were clearly felt to outweigh these views, and the movement towards blended provision seems inexorable. Whilst this study finds several arguments in favour of such a development, it also highlights several potential adverse consequences, some more easy to predict than others.

What is likely to be the impact on young people's learning and engagement?

We found that while there were clear negative impacts on young people's learning and engagement from moves online, there were also some positive aspects and mitigating factors; we consider these in turn.

Negative impacts

Study participants pinpointed pupil engagement as key to effective learning from WP sessions, and very many felt that this suffered when delivery was online. Various reasons for this were given, including online fatigue, inability to adapt sessions to real-time classroom conditions, lack of personal contact and the relative ease with which students could take a back seat. One of the most striking points was made by our interviewee teacher Megalodon, who said that while pupils generally expressed strong positive or negative views about in-person sessions, their evaluations

implied indifference to online provision, suggesting that the impact of virtual learning is so minimal that pupils do not, or cannot, form strong opinions on its usefulness.

Lack of personal connection was felt by many to be an important element missing from remote delivery, partly because of a fundamental human need for contact; in-person sessions created atmosphere and 'buzz', with pupils able to interact not only with the leader but each other, an aspect that was highlighted by members of our cohort of young people as important. The ability of practitioners to build informal relationships with pupils in a face-to-face setting was especially missed, with fewer opportunities online to have small, personal conversations that can be particularly impactful for individuals, or to spot where students need more help to understand.

Evidence from our tutoring pupil cohort, who met the same individual online for a series of sessions, suggests that it is possible to build relationships with a deliverer online, although this may be sub-optimal. Most respondents reported that they had been able to build a good rapport with their tutor; however half also stated that this would have been easier in person. It is also important to note that this result might have been different had pupils met the session leader only once.

The types and formats of sessions that are being delivered online are also likely to impact on pupils' experiences of, and learning from, WP sessions. It may be tempting to practitioner organisations to shift towards a pattern of providing a greater number of less in-depth interventions in order to 'hit' more students. However, there was great uncertainty among our survey respondents and interviewees as to the value of this, with a trade-off between reach and depth highlighted by many. The question such organisations must ask themselves is whether increased provision that is "scratching the surface" with more pupils is adding to, or replacing, more impactful interventions. If the latter, they risk the "degradation of the experience" highlighted by one practitioner.

In addition, the question of effective session design needs consideration. Interactivity was seen by the majority of practitioners, teachers and pupils as essential to the success of an online session, but this poses practical issues. Remote sessions may involve large numbers of pupils, props may be trickier to use, and it may be difficult to ensure that relevant physical materials are available; there was also a feeling that there is a general reluctance for pupils to interact online. Therefore, some respondents felt that it took significantly more skill and effort to deliver an impactful remote session, echoing findings from the literature that to be effective, online education content cannot simply be lifted wholesale from in-person sessions. Without careful consideration of specific design for remote delivery, WP sessions can end up being "pretty dry," as one teacher put it.

The above points are quite general, but it is also vital to consider the impact of moves online on target groups of pupils, particularly those from the lowest-participation groups. While there was a reasonable level of disagreement about the relative merits of online versus in-person delivery in general, the picture for the hardest to reach WP students was a little clearer. Some respondents pointed out that pupils who are particularly challenging to engage – "the ones who will switch off if you give them a nanosecond" – will be even harder to involve in an online session. Those working with the most disadvantaged, such as adult returners, those who are NEET, and care leavers, advocated for in-person provision, both because of enhanced concerns about IT access and a feeling that in-person experiences such as meeting students and visiting campus were particularly impactful. The issue of a university representative being physically present to give students a 'feel' for the university and be able to engage with and build the confidence of those unsure students, was raised in nearly every practitioner interview.

Positive impacts

Even though strong views were expressed in favour of in-person sessions, there are distinct areas of benefit to students from online provision, as well as some areas where it is unclear which delivery type is best.

One interesting point to note is that our pupil cohort were distinctly more accepting of remote provision than teachers or most WP practitioners. Students in our mini focus group stated that they preferred the video they had watched to the classroom session they received because they found the content more interesting; despite having a preference for in-person delivery in general, the more relevant content was enough to override this. Meanwhile, although our survey group as a whole expressed a mild preference for in-person activities, some actively preferred online sessions. In addition, and as mentioned above, they had generally found themselves able to build a rapport with the practitioner who delivered the sessions.

This ties in with discourse about how the personality of individual students might impact on their reaction to remote provision. For example, several of our survey pupils agreed that "being online makes me more confident to participate". Participants identified a number of characteristics, for example anxiety or lack of confidence, that might mean a learner was more receptive to online sessions. Shyness was another trait cited; however, there was disagreement on this point, as some felt that it was easier to draw shy pupils out or give them individual attention in a face-to-face setting.

A related area where some positive impacts of remote provision were suggested was in the area of questioning. The ability and stimulus to ask and answer questions was repeatedly raised by participants as being important to the impact of a session, and although many felt that this was easier in person, a significant subset disagreed, saying that pupils were "less inhibited" online, or liked the anonymity. This was confirmed by some pupils, for example the survey respondent who preferred to type because "I don't really like speaking out loud", and our focus group who noted that after watching a pre-recorded video, the person answering questions would be their familiar teacher rather than a stranger. Here, as with personality types, we can see evidence that online provision is likely to benefit a subset of pupils, although most are likely to be more comfortable in person.

Moving WP online can also be argued to make content more accessible to a greater number of young people. A number of WP practitioners stated that they were now able to offer online programmes to young people who would have found it difficult to attend in person; specifically mentioned were young carers, those with disabilities and military families, though this is likely to be true for many groups with additional needs, responsibilities and access difficulties. Whilst a fully online program may not be ideal for the majority of WP delivery, the ability to be able to offer alternatives to those who need it allows for a greater uptake of interventions by such learners, who are underrepresented within HE. This demonstrates the potential importance that online delivery has for disadvantaged students as well as enhancing the capability of WP to reach its access and participation goals.

There is also a certain amount of evidence from our pupil cohort, and from evaluation carried out by our colleagues at Pathways, that significant learning can occur via online methods. For example, all tutoring survey respondents stated that they had learned at least a moderate amount from their online sessions, while the large majority answered "I learn the same" when asked how online sessions affect their learning. Meanwhile our focus group clearly found the video they watched interesting and had taken a lot from it, and valued the opportunity to return to the content should

they need to refresh their knowledge. The Pathways data, meanwhile, showed no evidence that learning was inferior in the online arm than for the in-person provision. Two caveats must be raised about these findings, however; the first is that they are largely reliant on pupils' own abilities to assess their learning, with little analytical investigation of this. The second issue is that for two of the three groups, participants had chosen to attend sessions in their own time; we cannot therefore draw any information as to what the impacts might be for those who did not make such a commitment.

In the same way as there were certain session types which most felt needed to remain in person, such as campus visits, there were some types that a significant number of participants felt could or should remain online. One such was sessions where the intention was purely to relay a small amount of information, where it was possible that online delivery could allow providers to reach more pupils without detriment. Another interesting example is that of mentoring, where some practitioners reported an active benefit to remote provision in terms of behaviour, flexibility, concentration and honesty, although as with many aspect of this study, others would dispute this.

Finally in this section, it is important to consider the view of some practitioners that teachers and pupils, although expressing a preference for in-person sessions, ended up being perfectly satisfied with content delivered online. Some felt that schools were unduly reluctant to embrace online provision, or that pupils who said they wanted to receive interactive sessions would then prove unwilling to engage; others felt that pupils who were initially keen for in-person sessions were happy with online once it was delivered. Our pupil survey might tend to support this view, given that the preferences expressed for face-to-face delivery were quite mildly expressed, and comments such as "It would have been better if we could have someone come into school, but it was also great on the video." Teachers might be less willing to accept this position, however, given the strong views expressed in favour of in-person delivery and in many cases an outright rejection of further online sessions.

Issues specific to individual sign-up sessions

For many of our WP practitioner interviewees, particularly those working within higher-tariff universities, a significant proportion of their provision came in the form of sessions to which individual pupils could sign up outside of school time. This type of session comes with a particular set of findings with relation to online provision, which we discuss separately here.

In general, such individual sign-up sessions seem to garner better reactions from pupils than those delivered online in school, with reports of "high engagement" and pupils who "respond very positively compared to when in the classroom". This is generally assumed to be due to the fact that students have chosen, rather than been 'forced', to attend.

However, the ease of choosing to attend an online event comes with a commensurate penalty in commitment to that event, with signing up and then not attending a relatively common phenomenon. This attitude is also reported to be seeping through to in-person sessions, with students cancelling at the last moment. In addition, because students are generally at home on their own devices when participating in such sessions, it is particularly easy for them to disengage and turn off cameras.

The situation, then, is that interested and committed young learners are likely to have a good experience at an online event out of school hours. This is reflected in the Pathways data; there was no suggestion that those who chose to attend fared worse online than in person. However, we can know nothing about those who chose not to attend; and interested and committed young learners

are, it can be argued, likely to engage more with any type of session. The key issue is whether online self-sign-up sessions are more likely to attract those at the very 'keen' end of the distribution, thus narrowing the range of target learners reached, and hence missing those WP students who are less certain about HE; it may be that the ease of non-attendance leads to this outcome, however, more research is needed on this point. Furthermore, if only the 'already keen' pupils sign themselves up for sessions, it may be unfeasible to only offer these optional events. The likelihood is that some balance will need to be struck between extra, self-selection events and standard classroom offerings.

What is likely to be the impact on schools and teachers?

Our small cohort of teachers uniformly expressed a preference, often strong, for in-person WP provision, and this had also been observed by practitioners, who found that "In-person activity is what the schools want."

Despite this, however, it is clear that schools do enjoy some practical benefits from remote sessions. Streaming sessions into multiple classrooms at once avoids lengthy timetabling negotiations, and pre-recorded provision can be used at a time convenient to the teacher. This situation was encapsulated by the experience of teacher Megalodon, who described himself as "staunch advocate" of in-person activities, but then went on to say that his school was adopting a hybrid model of WP activity for the coming academic year because they will be able to "do more" and to avoid scheduling problems that have plagued his in-person provision.

However, these instances came with an acceptance that a benefit in convenience or flexibility was likely to come with a concomitant trade-off in effectiveness, as "in-person has more impact". In particular, informal pre-session conversations between teacher and deliverer can allow for individual pupils' needs to be highlighted, potentially benefiting those most at need.

One group of clear winners from moves online is schools who would previously have struggled to access WP provision, and now have something rather than nothing. These include schools in remote areas, or with poor transport links, and those who might have a cohort of target students too small to justify a visit from a practitioner. However, the providers' increased potential reach can mean losses elsewhere, for example in weakening relationships with existing partner schools as more are accommodated. There were also reports of schools being overwhelmed with offers from all over the country which would previously have been geographically limited.

The broader point is that hybrid provision has the capacity to give schools the option to choose sessions which suit their own preferences and needs. Where a genuine choice is offered, this may prove beneficial; however, if situations arise where schools are offered only remote sessions when they would prefer in-person, this could lead to a rupturing of relationships, with some teachers telling us that they would "simply stop booking" with such providers or would move to another organisation offering face-to-face sessions.

What is likely to be the impact on the provider organisations themselves?

An aspect of moves online that has not widely been considered in the literature is the personal preferences and job satisfaction of those delivering sessions. Many WP practitioners stated that one of the reasons that they enjoyed their work and found fulfilment was that they could physically go and meet young people from all backgrounds. Whilst many agreed that online delivery gave them more time within their personal life, less time travelling and in general less difficulty within their

jobs, this was not always seen as enough to consider removing the face-to-face aspect of their work. Although a few were keen to embrace remote delivery for reasons of sustainability or accessibility, the vast majority valued personal interaction as a key benefit of their role.

Viewed at an organisational rather than individual level, there was some concern that incorporating online activities in the delivery mix could lead to job losses, with one interviewee reporting that this had already happened. Conversely, employers could find it easier to recruit by offering remote working, with the skills mix demanded of employees altering to attract the more technically-adept.

From the perspective of service delivery, WP organisations benefited in some ways from the increased reach that online provision allowed them. The most obvious aspect of this increased reach is geographical, but it also brings the opportunity to access target groups who do not reside in the local area, for example representatives of different ethnic minorities. However, whether this increased reach results in organisations reaching more WP students is an open question. The problem with casting the net wider is that many traditional WP students are lost amongst the crowds; practitioners felt online delivery made it much more difficult to target WP students specifically, and this was a particular problem with those students who may yet be unsure whether they would like to attend university at all.

One major concern for practitioners was that shifts to online delivery appeared to be damaging the effectiveness of the evaluation that they were able to conduct. When asked to assess the impacts of pre-recorded sessions, up to a third of practitioners chose the "don't know" option; none selected this when assessing in-person sessions. Evaluation can be both formal and informal, and both of these suffered from a shift to remote provision; practitioners found that return rates for formal methods such as surveys were lower when they were not present, while not being 'in the room' meant that it was much more difficult to gather informal observation-based feedback. This in turn means that it is possible that moves online are resulting in a loss of session or programme efficacy which may not be readily apparent to delivery organisations.

Finally, a recurrent theme arising from our data is that many schools are still struggling with the technological aspects of online sessions. This may come as a surprise to some readers from outside the sector, as many workplaces have embraced effective remote working practices as a beneficial side-effect of the pandemic. However, it is clear from our findings that this cannot be said for many schools. A wide range of platforms are in use, which can be challenging to navigate; many schools have outdated equipment, and teachers may find including online provision in their classes to be stressful or challenging. The success of remote delivery into schools is therefore to some extent out of WP providers' hands, meaning that the quality of sessions differs across schools dependent on teacher skill and time to familiarise themselves with the technology. This was also a problem for less technologically capable WP professionals, where indeed some mentioned that they may be left behind if virtual delivery continues.

What constitutes 'best practice' for online WP delivery?

Despite the fact that providers plan to keep a wide range of sessions online, there is significant evidence that remote activities are generally most successful when intended specifically for the dissemination of factual information. Pre-recorded videos, information sheets, Q&As or a short lecture were considered a quick and simple way to get information across to the maximum number of people as efficiently as possible; in this sense they can work as well, if not better, than in-person delivery.

However, the core function of WP stretches beyond facts, aiming primarily to engage with young people and help them to understand and consider their post-school education options. As catalogued above, many participants felt strongly that virtual provision was 'second-best' to face-to-face in this regard. However, others stated that it could be effective if carefully designed and delivered.

There are two key points here. The first is that it should not be assumed that a session that was designed for in-person delivery can be lifted wholesale and put online. While this may have been a short-term solution in pandemic times, both the existing literature and the comments of our participants make it clear that a session that is not specifically designed for remote delivery is likely to have sub-optimal impacts.

Secondly, when designing an online intervention, care should be taken to make sure it is interactive and/or activity based, a style which was preferred by both teachers and pupils. Grabbing audience attention at the start of a session is particularly important, otherwise disengagement can occur rapidly. Interactivity can be achieved through various methods, but one which was advocated by some practitioners and teachers was to give schools physical materials in advance which could then be used during the session. In addition, maximum use should be made of the possibilities inherent in the online platform, for example by using visuals and media to enhance delivery or by use of technology to provide break-out rooms, self-guided sessions with choice of routes, or other innovative concepts.

Skilful delivery was another issue raised by our respondents, with suggestions that it may be harder for the practitioner to provide a vibrant and engaging session remotely than 'in the room'. Data from our pupil cohort was interesting in this regard, as several mentioned how much they valued humour, "jokes" and "fun" in an online session; this may not come easily to all provider staff and is another aspect to consider and practice. To summarise, the overarching message is that if providers wish to retain online provision – which the vast majority do – they will need to do a significant amount of work to ensure that this is as effective and impactful as it can be.

Study limitations

Whilst we had an excellent response from WP practitioners to our study, the number of teachers, schools and pupils who engaged with our data collection was disappointing. Because of this, an experimental, practical intervention which had potential to provide direct evidence of learning through different delivery methods was not possible.

There are several factors at play here; firstly, we were collecting data at a busy time of year (late spring), and secondly, schools are still in something of a 'catch up' return to normalcy from the COVID-19 pandemic, whereby business as usual has not yet resumed for all initiatives that are usually offered, including that of WP. Thirdly, a record-breaking heatwave prevented some planned school-based data collection from going ahead.

Another issue to note is that the university WP practitioners interviewed were primarily from higher-ranking institutions. This is problematic as previous research has shown that those who are disadvantaged, and hence most likely to be the target of WP interventions, are less likely to enter high tariff institutions (Connell-Smith & Hubble, 2018). The goals and methods used by WP teams are likely to differ with university type, as may the resources given to recruitment and widening participation departments. This means that conclusions drawn should be viewed with caution and may not reflect the full WP sector.

Opportunities for future research

This study has gone some way to tying together the viewpoints of WP practitioners, school staff and pupils. Whilst problems have occurred such as small samples, a wealth of information has been discovered and hence can inform future research. At the time of writing, the UK government is pursuing an increased focus on how WP interventions can impact on attainment; it would be interesting to examine this aspect in the light of our findings, maybe by using a quasi-RCT as discussed above.

Additionally, given the issues outlined in the previous section, it would be interesting for further research to take place once the educational landscape has settled, in order to better understand what provision is being offered, preferred and continued. Furthermore, since the experimental, practical intervention planned for this study was cancelled, it would be worthwhile to reinstate this and evaluate its impact for students experiencing different methods of WP delivery, to compare their impacts more directly. Such direct comparisons of similar or equal session content have thus far not been evaluated anywhere in the literature, and hence future research may like to explore this.

Similarly, research looking at a broader range of educational institutions, both geographically and by rank, would be interesting to note whether the issues found here by practitioners working in higher tariff universities are universal across the sector.

An interesting point that was touched on by some respondents but not explored in depth was how peer interaction is impacted by online provision. This topic is the focus of previous work by the lead author (see Canovan et al., 2021); further investigation into how remote sessions might affect the findings would be useful to more fully understand the impacts that virtual delivery can have.

One intriguing finding was that some practitioners had found online mentoring to be actively preferable to in-person sessions, due to better behaviour and concentration, as well as greater honesty, on the part of young learners. This is a topic that would benefit from, and lends itself to, a rigorous evaluation.

Conclusion and recommendations

Based on the above findings, we attempt to give some direction about how online WP provision should be approached going forward. However, it is important to note that there was a high level of disagreement among respondents about many of the subjects discussed in this report, and while the majority may take one view of a particular aspect, a minority is sometimes vocally opposed. In order to appreciate the full nuance of the picture painted by this study, it is necessary to read the complete report.

With that said, we make the following recommendations:

1. It is tempting for organisations to embrace online delivery because they can reach more pupils in a wider geographical area. However, it is important to acknowledge that these activities have the potential to be less impactful than face-to-face delivery. Providers should ask themselves whether the total effectiveness of their provision is being negatively impacted by this shift of focus.

2. Students who are already interested are always likely to benefit more from any session, and moves online can exacerbate this, for example by making it easier for individuals to disengage, or by removing informal opportunities for conversation. There was broad agreement that the hardest to reach are more in need of in-person interventions; providers should consider whether remote provision is damaging to their potential impacts on these groups.

3. However, some groups of pupils may prefer online provision, either because of their personality traits (eg lacking in confidence) or personal circumstances (eg young carers). Hybrid provision, carefully designed, could enable both these young learners and those preferring in-person interventions to be reached.

4. Although school representatives voiced (strongly) negative views towards online provision, schools can in fact find this beneficial, enabling more pupils to be reached with lessened organisational difficulty. However, forcing schools to accept such sessions can damage relationships and ultimately make them look elsewhere for WP content. Allowing for school preferences, particularly among trusted partners, is likely to lead to greater acceptance.

5. Pupils, by contrast, expressed only a mild preference for in-person sessions, with some preferring online. Where providers have strong partnerships with schools, it may be possible to take the learners' views into account when deciding on provision type.

6. The ability to ask questions was repeatedly cited as an important aspect of WP interventions, however the evidence is mixed as to whether this is helped or hindered by moves to online delivery. As a result, we advise that providers monitor and consider questioning behaviour in all sessions and take steps to facilitate this if necessary.

7. Organisations running sessions that individuals can sign up to may find that there is no adverse effect on learning from being online. However, as noted in point 2, the tendency for the already-keen to sign up to such sessions may be exacerbated, meaning that overall WP goals can be missed.

8. It is clear from our findings that the ability to evaluate provision can be severely adversely impacted by moves online. If organisations do not carefully consider how to

measure the effectiveness of their remote delivery, they risk being unable to determine whether or not their activities are impactful.

9. Successful online interventions often fall into one of three types, and practitioners might wish to consider focusing their remote provision in these areas:
   a. Short, snappy sessions intended purely to relay information;
   b. Interventions that are specifically designed for delivery online, including interactive elements, innovative use of technology and, potentially, physical materials;
   c. 1:1 mentoring sessions – although some disagreed.

10. Effective remote delivery can require different, or greater, presenting skills than those needed in-person. Organisations that intend to retain an element of online provision should consider providing specific training for staff in this area.

Overall, most participants in our study assessed online WP provision as less impactful than its face-to-face equivalent; however, most also agree that there is merit in continuing to offer some interventions virtually. The increase in potential reach has aided accessibility for certain students and sharing of basic information online has been widely agreed as successful, but an observed loss of engagement and personal interaction demonstrates a need for in-person sessions to continue, particularly for those who are unsure or lack confidence when choosing their options for post-school education. Further research is needed to uncover whether there is a limit to the effectiveness of virtual learning, and what the ideal hybrid model looks like going forward.

Acknowledgements

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