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# Virtual internships in open and distance learning contexts: Improving access, participation, and success for underrepresented students

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**ABSTRACT**

This study at The Open University in the United Kingdom examined the effectiveness of specifying internship opportunities for underrepresented student groups in two faculties. Our data, gathered through intern focus groups and supervisor interviews, demonstrate that the virtual internship scheme has been successful from both intern and supervisor perspectives, providing flexible and supportive opportunities which help interns to develop transferable skills and confidence. The virtual internship approach therefore provides opportunities for large-scale distance learning institutions to routinely offer work experience to their students, supported by the further development of effective remote working practices. Unexpected benefits of this program emerged through the staff-student partnerships developed in university-based internships. Future research will focus on mechanisms to further improve and scale up the virtual internship program to enhance access for underrepresented students and to explore how virtuality contributes to new perspectives of employability.

As a national distance learning institution, The Open University in the United Kingdom (UKOU) faces considerable challenges in offering its undergraduates meaningful work experience opportunities. The advent of increased digital capabilities in synchronous and asynchronous communication technology and the step change in remote working environments and practices in many employment contexts following the COVID-19 pandemic have enabled a reimagining of the undergraduate internship as a tool to improve student outcomes in distance learning contexts. Since 2018, the UKOU has offered, at a small scale, virtual internship opportunities to its undergraduate students and recent alumni. This study examined the effectiveness of specifying internship opportunities for underrepresented student groups in two faculties to promote employability.

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The literature on internships and related types of work experience is well developed and comprises several different practice perspectives and higher education contexts including (but not limited to) the traditional internship (King & Sweitzer, 2014) and e- or virtual internship (Bayerlein, 2015; Jeske & Axtell, 2014), cooperative education (Haddara & Skanes, 2007), work experience (Forsyth & Cowap, 2017; Jackson & Wilton, 2016), and work-integrated learning (Kay et al., 2019). Although differing in terminology, each refers to short-term opportunities for students to gain work experience and practice, usually within external professional settings (place-based or accessed remotely, e.g., Pretti et al., 2020), through paid, unpaid or volunteer work (McHugh, 2017), and as part of course credit or another university-designed experience or as an extracurricular activity (Jackson, 2018).

Acknowledging this broad range of perspectives, our literature review focused on two areas related to the context within which the program is set:

1.　virtual or remote internships, particularly following the COVID-19 pandemic
2.　the growing movement toward more diverse and inclusive higher education, and more specifically in distance and online contexts.

## Literature review

### Virtual, remote, and e-internships

The literature on virtual or remote internships has grown with the rise of hybrid learning programs. Jeske and Axtell's (2014) work in assessing the emergence and prevalence of "e-internships" (p. 458) notes that one challenge comes from the varied terminology and areas of the literature where discussions can be found. Nevertheless, it appears that various forms of "electronic internships" (Martz et al., 1999, p. 18) have been available since the internet became widely available. For example, Martz et al. reported on an electronic internship offered to students on a United States of America campus, who telecommuted with an external employer as part of campus-based internship. Today, the contexts of virtual internships are far more varied, particularly following the COVID-19 pandemic, when employers and higher education institutions (HEIs) made emergency transitions to remote and online working and learning (Pretti et al., 2020).

Although virtual internships have diminished geographical barriers, they can offer similar opportunities to more traditional, place-based counterparts. However, there are some important differences that have implications for students, employers, and HEIs (Jeske & Axtell, 2014). Flexibility is a key characteristic of a virtual internship, which requires employers and supervisors to be more responsive, for example, when working in different geographic localities. Virtuality can also demand more technological and interpersonal skills from interns as well as skills in independent working and learning (Jeske & Axtell, 2014). Acquisition of this latter set of skills is an important distinction for students in distance and online learning (Samra et al., 2021), which can make virtual internships an appropriate work experience approach (Briant & Crowther, 2020; Roy & Sykes, 2017). Interestingly, the literature tends to focus on student experiences and their development of the requisite skills with less detailed examination of the experience and views of supervisors on acquiring supervision skills.

Additionally, computer-mediated communication is a distinctive characteristic of virtual internships (Jeske & Axtell, 2014), which highlights the importance of social support and bonding mechanisms. Remote working during the pandemic brought new working practices in organizations as employers and staff developed new communication patterns and online teamworking approaches (Waizenegger et al., 2020). As with these changes in thinking about remote and supportive management practices, support for students undertaking virtual internships is considered a crucial element for success (Jeske & Lineham, 2020; Ranabahu, 2020). Also important is that the work is meaningful, which Pretti et al. (2020) noted could be more challenging to communicate to an intern in a remote environment.

Flexibility, requisite skills and support, and meaningful work are all facets of effective virtual internship practice. However, our study also explored the suitability of these types of work experiences for underrepresented students. We now turn briefly to discuss this literature.

## Virtual internships for inclusive practice

Work experience is a recognized strategy to improve employment opportunities (Bennett et al., 2008). However, research also indicates that the nature of some internships creates barriers to entry. Hora et al. (2020) detailed results of a large-scale survey of American university students about internship access as well as their benefits and challenges, including the barriers experienced by underrepresented students. Nearly two thirds of their respondents could not access internship opportunities, despite wanting to, due to conflicts with their existing paid work, study load, and a lack of discipline-related opportunities. The authors noted that such barriers could exacerbate inequalities for underrepresented students.

Virtual internships can offer solutions for "nontraditional students returning to education and those individuals who have been disadvantaged in the past due to their individual mobility, financial or family responsibilities" (Jeske & Axtell, 2014, p. 458). In the UK, paid work experience is one of several approaches that have been employed to improve awarding gaps and to support the creation of inclusive curricula and pedagogies (Hall et al., 2022; Stentiford & Koutsouris, 2021).

## The UK context

Since 2018, the UK Government's Office for Students has mandated HEIs in England to develop access and participation plans as a condition of registration (Office for Students, 2018). Separate but similar requirements have been mandated by devolved governments in Scotland, Wales, and Northern Ireland. These 5-year access and participation plans address awarding gaps and inequities across several underrepresented groups, including students from geographical areas of low socioeconomic status, low household income or low tertiary education participation, students from ethnic minority groups, students with disabilities, mature students, and care leavers. Institutions have detailed investments in strategies to address inequities in these and other

groups through wide-scale projects—often to transform pedagogical approaches, learning design, and support for students.

Key to many such strategies are student-staff partnerships, which aim to enhance co-development of a more inclusive curriculum (Hall et al., 2022). Research on staff-student partnerships reveals an important emphasis on "co-creation" as an underlying framework (Bovill et al., 2016, p. 196). While student roles such as "consultant", "co-researcher", "pedagogical co-designer," and "representative" (Bovill et al., 2016, pp. 197–198) are gaining traction in the sector, especially within the context of equality, diversity, and inclusion strategies, there is limited research investigating the development of what we are calling *university-based internships*, that is, internship programs intentionally designed as work experience within academic organizational settings.

### Staff-student partnerships for employability skills

The focus of staff-student partnerships frequently centers on amplifying the student voice. Hall et al.'s (2022) account of the Developing Learning Communities scheme at the University of Brighton (UK) emphasizes the development of a sense of belonging among the scheme's paid student partners, the importance of reflective inquiry at the heart of the process, and the need to "democratise and develop space for underrepresented voices to speak and be listened to at an influential level" (p. 334). While there are clear benefits of the scheme for the development of inclusive curriculum and a successful partnership approach for both staff and students, there is little information on the benefits to student partners of this work experience in terms of enhancing their career aspirations or employability.

Mercer-Mapstone et al. (2021) discussed the results and implications of a similar project in an Australian university's science faculty to create an inclusive curriculum. Here, too, results emphasized belonging, reflective practice, and empowerment as keys to success. The authors also noted some important staff perspectives in managing the initiative. Many cited the difficulties in finding sufficient time to dedicate to the project in their workload but also recognized an underlying requirement for training to support their own skills in working with interns.

The development of confidence is a key employability skill that has well-established links to work experience and success for underrepresented students. For example, students with disabilities can benefit tremendously from work placements (Moriña & Biagiotti, 2022) and particularly virtual internships (Kraft et al., 2019). Confidence and empowerment are also primary benefits of students-as-partners initiatives, where developing a respect for others' voices (Cook-Sather, 2020) has a natural alliance with "engaging across difference" (King & Sweitzer, 2014, p. 49), a key aspect of high impact educational practices (Kuh, 2008; O'Neill, 2010). Our study contributes to a deeper understanding of how staff-student partnerships—especially with underrepresented students—can facilitate acquisition of employability skills.

### The study's context

This study is set within a program that had been running for 4 years, offering paid employment to current students or recent graduates with external employers but at a small scale relative to the student population size of circa 175,000 students. Internships were designed to be performed alongside students' work, personal and study commitments, recognizing that these can present barriers to participation in internships by distance learning students.

For this study, the intern cohort were part of a larger university access and participation plan strategy to improve graduate outcomes through internship opportunities for underrepresented students. Opportunities were designed primarily as university-based internships.

The pilot was managed jointly by the Faculties of Business and Law (FBL) and Science, Technology, Engineering and Mathematics (STEM) as well as the Placements team of the university's Careers and Employability Service. Guidance about the process and specifying tasks suitable for internship roles was provided to supervisors by the Placements team.

Eligible students were proactively targeted using data from student records (a total of 5,469 students were emailed for STEM opportunities and 16,350 students for FBL opportunities). Internships were also centrally advertised to all students on a student job board with an explanation of the eligibility criteria. Applicants needed to have identified as being part of one of the targeted student groups and have recently studied or were studying business, law, or STEM subjects to be eligible. Applications were shortlisted by supervisors and a competitive interview process held. Once recruited, interns were inducted by their supervisor(s) into the requirements of their role.

A total of 17 virtual interns were appointed during a 4-month period (March to July 2022), each lasting from 6 weeks to 4 months, for around 10 hours a week. Some projects deliberately recruited two interns to enable peer support and collaborative working practices. Table 1 lists the range of the projects offered.

The interns worked remotely, connecting to the institution using their own laptop or one provided by the university and were paid the hourly living wage (this is approximately 10% above the UK minimum wage), ensuring that socioeconomic status was not a major barrier to participation. In some cases, visits to the campus were funded, but work was predominantly carried out remotely.

**Table 1.** University-based virtual internship projects, 2021–2022.

| Discipline area | Role focus |
| --- | --- |
| FBL | Surveying student views of United Nations Sustainable Development Goals |
| FBL | Evaluating an equality, diversity, and inclusion seminar series |
| FBL | Supporting work in School of Business accreditation and implementation |
| FBL | Evaluating inclusivity of law curriculum |
| Professional Services | Reviewing data compliance policies |
| Professional Services | Evaluating a student support service |
| STEM | Evaluating inclusivity of STEM curriculum |
| STEM | Supporting faculty public engagement officer |
| STEM | Participating in the design of a new design qualification |
| STEM | Supporting external engagement for mathematics |
| STEM | Evaluating student peer-support activities |

*Note.* FBL: Faculty of Business and Law; STEM: Faculty of Science, Technology, Engineering and Mathematics.

## Method

For this study, a qualitative, constructivist methodology was used to explore the use of virtual internships to promote work-readiness for underrepresented groups in higher education. The approach permitted respondents to speak of their experiences (Hughes & Dumont, 2002) and the meanings they took from these experiences in their own words (Creswell, 2014). It also permitted identification of similar and differing views about the experience of virtual internships (Forsyth & Cowap, 2017). Primary data were collected post-internship using focus groups with interns, semi-structured interviews with supervisors, and additional qualitative data gathered through organizational processes monitoring the internships.

Focus groups allow collection of views from a diverse group (Halcomb et al., 2007) and are "friendly" (Morgan & Krueger, 2013, p. 18), permitting interaction between researcher and participants, important when speaking to students online. Focus groups aid research of the experiences of specific groups (Hughes & Dumont, 2002) and facilitate the development and understanding of social narratives and social communication (Hollander, 2004).

In line with the virtual nature of the internships, the focus groups were held online using Microsoft Teams, allowing participants to see and talk to each other in real time. Focus groups were facilitated by two of us and lasted 1 hour. Discussion topics included exploration of the nature of participants' internships, support received, connections made, induction experience, and next steps for the intern. Focus groups were recorded and automatically transcribed. Transcriptions were compared to recordings to ensure accuracy.

Data were collected from supervisors using semi-structured interviews, allowing triangulation with focus group data (Hollander, 2004) and more detailed examination of the experience and views of supervisors. Semi-structured interviews allow co-construction of meaning through discussion and interaction (Creswell, 2014; Twining et al., 2017) and were used by Ward et al. (2022) to explore the experiences of interns, supervisors, and coordinating staff in their investigation of internships for Indigenous students in the United States of America. We each administered one or more interviews, which lasted 45–60 minutes.

A third set of data was used for triangulation from structured interview data collected as part of standard internship monitoring via the university's Placements team. These data comprised records collected to a standard template before the internship started, halfway through the internship, and once the internship had finished.

### *The study sample*

The sample was drawn from the 17 virtual interns and the 16 supervisors involved in the program. All interns and supervisors were contacted to participate in the research study. Attendance was voluntary and unremunerated. Institutional ethical approval for research among students and staff was granted, and students gave their permission for their anonymized data to be used for research purposes. Seven interns (41%) attended one of two focus groups, and eight (50%) supervisors agreed to be interviewed.

### Data analysis

Findings from the data collected were analyzed manually using thematic analysis in line with the 6-stage process outlined by Braun and Clarke (2006). Transcripts from the focus groups and semi-structured interviews, and surveys by the Placements team were coded separately by two of us who cross-checked each other's work for consistency. Inductive, open coding of transcripts allowed the identification of themes and sub-themes based on their interpretations. These differed between supervisors and interns, but common themes were found. Results from these thematic analyses are presented next with quotations from interns and supervisors presented together, in keeping with our triangulation approach. Gender-neutral pronouns are used to support confidentiality.

## Results

### Confidence to apply

Among the interns we spoke to, we found that the confidence-building nature of the experience related not only to developing confidence in the work context but also to having confidence to apply for job opportunities more generally.

Several interns discussed their lack of confidence in applying for the internship. One intern commented that although they applied for more details of the role, they did not make an application until they were contacted and encouraged by the Placements team:

> I had requested the [applicant] package, but I was not brave enough to apply because I thought I didn't have enough knowledge. I was not worthy enough, and I remember [a member of the Placements team] called me and said, "Why don't you apply? We are extending the deadline." [I thought,] OK, that's fine. I'm gonna, but with no hope. But I ended up in the internship. (Intern 6)

A second intern added, "I was amazed at that they actually gave it to me as well" (Intern 7).

All the interns spoken to expressed renewed and additional confidence from completing the internship.

> [It's] been a really great experience. I think my confidence overall has, just in, like, managing work and things like that [ … ] I can carry out a task and I can fulfil it to the standard that they want. So, I think I'd recommend anyone doing internship, it's a really good experience. (Intern 4)

All the supervisors interviewed remarked on the significant improvement in the confidence of their interns as the internship progressed. This was often coupled to soft-skills development resulting from being part of a team and having work recognized and valued. Several supervisors mentioned their own response to this development, for example:

> [I felt] joy and pride to see the development over the short period of time. [Our intern] developed so far and was able to do a lot and then to see [them] from finishing [their] degree through to getting a job and [their] results, all within such a short space of time. It was just a really lovely thing to be able to feel you've made a big impact, even if it's only one person. (Supervisor 4)

### *Flexibility*

All interns felt the flexibility of a virtual internship was vital to the program when students were distributed across the four nations of the UK. One intern, describing how the virtual nature of their internship meant that they could apply for it, said, "But I just feel like, you know, the flexibility and the fact that it was virtual just made it open to so many, you know, opportunities for people, especially for me. I live … quite far away from campus" (Intern 5).

Another intern remarked that becoming a virtual intern was a natural extension of having been a distance learner:

> I think it's a really good thing because I don't think many other universities offer that. I know they offer internships but not virtual, and obviously as you're studying virtually, you know, it's a lot easier to do a virtual internship. (Intern 1)

Several students had other paid work and/or study plus caring responsibilities and the ability to flex hours around these other responsibilities was essential for their participation in the scheme. The level of accommodation by the intern supervisor was seen as being pivotal to the success of the internship for the intern, with one commenting in the focus group, "My line manager was really flexible with timings and setting expectations and that sort of stuff, which made it really easy to kind of fit in, juggling a lot of different things at the same time" (Intern 1).

The number of hours in total worked in the week was also an enabler for interns. One intern remarked that they could not work more than a set number of hours per week due to childcare commitments. Describing their 18-hours-a-week internship, they said, "For me, anything under 20 [hours] is perfect because I can fit it in, and it goes back to the flexibility as well where you can fit the hours into the week" (Intern 7).

One focus group participant with a physical disability specifically valued the flexibility to accommodate their variable physical condition, saying, "The flexibility really allowed me to be spontaneously off when [I felt unwell] and then the next day catch up and then catch up the rest of the week or the week after" (Intern 4).

The flexibility of a part-time internship let students keep up to date with their course assignments, and supervisors connected to the scheme were very willing to flex around student deadlines. As Intern 5 noted, "At the beginning, for the first month for me, I was doing two [end-of-module assignments] at the same time and the internship. So, I was really trying to juggle a lot of things."

All supervisors interviewed appreciated the need to provide a highly flexible experience for their interns. As staff in a part-time distance learning institution, they made allowances for the competing demands and responsibilities faced by their interns. Supervisors facilitated flexible hours and nonstandard working days. This was particularly highlighted in the context of the pandemic, as one supervisor commented:

> I think if we'd have had this conversation two or three years ago, I'd have been a little more reluctant. But because of the experience everyone has had with the pandemic and that it has become the norm, I think there has been no problem. (Supervisor 7)

## Nature of tasks

All the interns commented that the nature of the tasks within the internship were flexed to some degree after their appointment. This reflects, in many cases, a welcome willingness to produce a tailored experience for the intern. One intern was clear that their supervising team asked them explicitly at the outset what they were trying to achieve from the internship in terms of career development. The team then focused the internship to developing skills this intern would find beneficial. Explaining their experiences in the focus group, they said, "We went through all the skills that I would need for [my chosen career aspiration] and examples of things that they could get me to do that I could use in the future" (Intern 3).

Another intern described how their supervisor had been flexible about the exact specification of the role until they were appointed, so the internship could be adapted for the successful applicant. Supervisor interviews corroborated the perceptions of a significant amount of customization of the role once the successful candidate was appointed.

## Sense of belonging

All interns valued being made to feel part of the team and, when asked to pick out the standout highlight of their internship experience, Intern 2 explained, "I think probably for me the biggest part of it was that I felt I belonged with the team. They did everything they could to make you feel part of the team and that was really, really nice."

The authenticity of the tasks the interns were expected to complete clearly supported this sense of belonging and of work being valued, with Intern 5 saying during the focus group, "[We] didn't feel like interns. It just felt like we were all working for the same goal and all our ideas were respected, even though maybe some of them didn't get taken up completely."

Even where the internship role was closely tailored to the needs of the student there was very little sense of "make work" reported by the interns. Several interns mentioned that their opinion and their own lived experience, where relevant to the internship role, was valued by their team. One intern expressed surprise that their ideas were taken up:

> Yes, I was quite surprised because the team was very, very flexible. In the beginning we had one objective and suddenly, as per my experience in studying human behavior, I told them, no, this is not possible, we should change this in this direction, and they say, OK, that's fine. (Intern 6)

Several supervisors commented on the added value the intern brought during the placement, not only in the tasks completed but the student perspective and experience of being an undergraduate. Several internship roles were designed so that students were contributing to curriculum design, supporting reviews, or researching other universities. In this respect, the students' lived experiences as a member of an underrepresented group proved invaluable.

## Communication and support

All interns within the focus groups agreed that support from their supervisors was an essential ingredient in the successful experience. Excellent communications and a clear sense of inclusion within a team were cited as significant support elements.

Students with the most positive experiences cited regular meetings with their line manager. Intern 7 explained, "I usually have regular meetings. So, it's either in the team with everybody or I have a personalized meeting where it's just me or just me and another intern."

Some interns developed other ways of sharing their progress with their supervisors. One intern mentioned a researcher diary approach:

> I decided to create a diary, a researcher diary, which was shared on Google Drive. So, my supervisors were able to check what I was doing, and they were able to leave comments. And so, we were all the time in touch. (Intern 6)

Other interns had experienced shared documents, databases, shared coding sites and the full Microsoft Office suite—in fact, all the tools that university staff use.

Several students cited the importance of a clear induction period with opportunities for extended meetings with supervisors and the wider team. Frequently, supervisors used the first 2 weeks for interns to undertake compliance training packages, required of all university employees, and to offer straightforward tasks to allow the intern to gain confidence and understanding of their role. Interns always welcomed these steps, although they also noted these activities reduced the time available for the substantive part of the internship. After induction, interns with the most positive experiences cited well-articulated, appropriate tasks, clear processes for having questions answered, and well-developed ways to get feedback on their work as key aspects of excellent support.

Where slight disagreements occurred over work direction, some interns found the university's Placements team helpful in providing advice and guidance on resolving issues. Intern 5 explained in the focus group, "But also, just having the internship team to check in with as well, I think has been really helpful and especially if you have any kind of issues which you didn't really want to bring up [with your supervisor]."

Indeed, even coping with these small disagreements was cited as a positive, valuable experience in learning how to deal with minor workplace conflict.

## Working at a distance

All the supervisors interviewed took care to mitigate any potential issues of isolation from the working environment arising from the virtual nature of the internship. All mentioned extensive opportunities for interns to meet in Microsoft Teams on a regular basis, whether one-to-one or as part of the wider team. Email was frequently cited as a good means of communication. One supervisor who supervised two interns mentioned the importance of bringing the interns into the team's online "coworking space" twice a week for extended times. This is a Microsoft Teams meeting where staff work on their own projects alongside each other as if in an office. This type of

coworking afforded opportunities to check in and catch up informally, and the online nature of the meetings created a feeling of equity between participants that might not exist in a face-to-face context.

> And doing it virtually you do get the whole team [present]. I think sometimes being on Teams or Zoom as a team, in the way that we worked, creates an equality that you might not have in the room. If we all are sitting around a table, I wonder if that would be as equal. (Supervisor 2)

Given the mass movement to working remotely as a result of the pandemic, it was apparent from the focus group conversations that interns had experienced a whole variety of ways to work at a distance effectively and had become confident and comfortable in online environments.

All supervisor interviews revealed that the workload of employing an intern is not insignificant. Several mentioned the unexpected overheads of managing basic issues around timesheets, providing information technology equipment and passwords, and supporting unexpected events such as illness and time off. Setting and monitoring intern tasks and providing feedback also required time to be set aside but, although this contributed to already busy workloads, most supervisors enjoyed the time spent with their interns. The supervisors characterized their experiences according to different archetypes, including line manager, coach, mentor, and research supervisor. One supervisor commented that they would have welcomed training in coaching to support this role; another commented how refreshing it was to have direct student contact, something they did not have routinely. Notably, Supervisor 1 mentioned being an internship supervisor offered them a positive experience of line management, something they had been reluctant to undertake before.

### Discipline match and career aspirations

This scheme required interns to be studying or be alumni in business, law or a STEM-related discipline, and several interns felt a strong connection to their subject background. For some students, the internship experience supported more informed reflection on future careers. For example, one intern used their mathematics skills, but in new and challenging contexts. Others found close synergy between their studies and the internship, some leading to potential further study. One student commented that the internship had crystallized their thinking and their discipline interests, which had led them to enroll for a part-time master's degree and change their job to a brand-new field. One intern noted relevance was important to them:

> It was relevant to my studies. Because you study something, but you don't know what you're studying, how to connect data to real life. And this was the perfect opportunity to know. And now I know why you need to master [the programming language] Python, and now I have a clear path to follow. (Intern 6)

Another intern described how the internship and the work completed confirmed their choice of direction for postgraduate study and encouraged them to seek a competitive volunteering opportunity. Several interns commented positively on the support and encouragement they received from their supervisors regarding future plans.

Similarly, many supervisors were aware of the next steps for their interns and mentioned interviews, jobs, further study, and volunteering opportunities that their interns were now embarking on post-internship. Celebrating each intern's success was also a prominent theme of all supervisor interviews.

## Discussion

### Benefits and success

The original aim of the virtual internship project was to demonstrate, via a proof-of-concept approach, that specifying virtual internship schemes for underrepresented students led to similarly positive outcomes reported by nonspecific schemes. Our data has shown that the virtual internship scheme has been overwhelmingly successful for the interns and supervisors we spoke to. The pilot virtual internship project provided flexible and supportive opportunities that helped the interns to develop confidence in themselves, confirming the conclusions of prior studies on internships for underrepresented students (Kraft et al., 2019; Moriña & Biagiotti, 2022). In addition, our interns developed skills towards both new and existing career ambitions. Some reported that they had secured subsequent employment, further study, or internship opportunities as a direct result of their internship. The supervisors we interviewed identified a supportive infrastructure that demonstrates positive benefits that can be derived from collaborative working with careers service units in universities (O'Neill, 2010). There is some evidence, however limited in scale, that such opportunities are part of a suite of successful approaches to support graduate outcomes for underrepresented students. Our student interns have agreed to let us contact them in a year's time to follow up on their progress.

An unexpected benefit from the scheme emerged strongly from the data, namely the positive effect on student engagement that had resulted from close interaction with, and listening to the voices of, students from minoritized groups. The scheme allowed supervisors to have high impact exposure to students that they do not necessarily routinely experience within the institution's large-scale, distance learning environment. This led to some interesting co-creation opportunities, mirroring the models of student-staff partnerships that have been used effectively to enhance university inclusivity activities and curriculum development (Bovill et al., 2016; Hall et al., 2022; Mercer-Mapstone et al., 2021).

Our results also indicate that the experience was beneficial for the personal and career development of supervisors, providing opportunities to gain experience of line management and associated supervisory skills. A strong theme of intern-centeredness came through, with supervisors striving to provide meaningful experiences and appropriate activities tailored to their interns' personal and professional development goals. These findings align with those of Cotronei-Baird (2019), who found that academic supervision and mentoring in internship programs can help staff understand the impact of supporting student employability, success, and graduate outcomes.

## Limitations

Results are limited in generalizability, particularly as these opportunities have been taken up by a very small percentage of students in the institution. Over half of the more than 175,000 students studying with us have declared a characteristic that places them in a priority group in our APP. Our 17 virtual interns therefore represent a small proportion of the much larger population of students who could benefit from the scheme.

Moreover, the sample of students who participated in our study represents just half of the students who took up the opportunity, an even smaller proportion of the students who could have applied but did not, or who were unsuccessful during the recruitment process. Although we triangulated our data, it is possible that those interns and supervisors we spoke with, and their experiences of the program, were unrepresentative of the larger sample and may mean our data is biased toward those with a positive experience.

Our data indicate that the success of our scheme relied upon a considerable investment of staff time on the part of the supervisors. Since this was a pilot scheme, it is difficult to predict the extent to which future iterations can rely on similar dedication from individuals.

## Implications for research and practice

Although the program indicates successful internship practices with underrepresented students, the virtual internship scheme was originally set up to provide opportunities for work experience in external organizations. With the next cohort of virtual interns, we plan to explore the differences between university-based and externally based internships for underrepresented students, for example, in the level of supervision and support, which has been shown to be a crucial factor in their success (McHugh, 2017). We would also like to explore further the differing motivations of supervisors in university-based versus externally based contexts in creating internship opportunities.

We also want to contact those students who were not successful during recruitment to investigate the need for a wider suite of careers services for students that includes, but is not limited to, virtual internships. Moreover, research indicates that those participating in internships are often higher achieving than nonparticipants and achieve better study outcomes (Hora et al., 2020). These data were not examined for this study but could be considered for a future study.

Our research also indicates that enhanced support for supervisors in a university context can harness the potential for academic professional development opportunities. Studies show that wider university approaches facilitated by academic developers can bridge the gap between the traditional academic teaching role and the more facilitative coaching and mentoring role valued by interns (Fitzgerald et al., 2020). As a result of this study, potential supervisors are now made aware of the expected time commitment and are offered appropriate training and support.

Finally, given what appears to be a sea change in remote working environments— both within the higher education sector and more broadly in organizations—we would like to explore how virtual internships can provide authentic work experiences

in a post-pandemic world. Evidence is already emerging that virtual internships need not be emergency substitutes for place-based work experience (Gill, 2020) but can provide meaningful experiences that help students develop relevant skills and behaviors necessary for effective remote working (Hruska et al., 2022; Irwin et al., 2022). Indeed, this raises the question of the extent to which distance learning providers in particular are best-placed—perhaps morally obliged—by their very nature to offer work experiences to their students that support the development of effective remote working practices. With our next cohort of interns, we would like to see how to scale up the virtual internship experience to provide access to a wider range of organizational experiences and explore how virtuality contributes to new perspectives of employability.

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## Data availability statement

The data that support the findings of this study are not publicly available due to restrictions related to their containing information that could compromise the privacy of research participants.

## References

Bayerlein, L. (2015). Curriculum innovation in undergraduate accounting degree programmes through "virtual internships." *Education + Training*, *57*(6), 673–684. https://doi.org/10.1108/ET-09-2014-0110

Bennett, R., Eagle, L., Mousley, W., & Ali-Choudhury, R. (2008). Reassessing the value of work-experience placements in the context of widening participation in higher education. *Journal of Vocational Education and Training*, *60*(2), 105–122. https://doi.org/10.1080/13636820802042339

Bovill, C., Cook-Sather, A., Felten, P., Millard, L., & Moore-Cherry, N. (2016). Addressing potential challenges in co-creating learning and teaching: Overcoming resistance, navigating institutional norms and ensuring inclusivity in student-staff partnerships. *Higher Education*, *71*(2), 195–208. https://doi.org/10.1007/s10734-015-9896-4

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Briant, S., & Crowther, P. (2020). Reimagining internships through online experiences: Multi-disciplinary engagement for creative industries students. *International Journal of Work-Integrated Learning*, *21*(5), 617–628. https://www.ijwil.org/files/IJWIL_21_5_617_628.pdf

Cook-Sather, A. (2020). Respecting voices: How the co-creation of teaching and learning can support academic staff, underrepresented students, and equitable practices. *Higher Education*, *79*(5), 885–901. https://doi.org/10.1007/s10734-019-00445-w

Cotronei-Baird, V. S. (2017). Academic hindrances in the integration of employability skills development in teaching and assessment practice. *Higher Education*, *79*, 203–223. https://doi.org/10.1007/s10734-019-00405-4

Creswell, J. W. (2014). *Research design: Qualitative, quantitative and mixed methods approaches* (4th ed.). Sage.

Fitzgerald, R., Huijser, H., Meth, D., & Neilan, K. (2020). Student-staff partnerships in academic development: the course design studio as a model for sustainable course-wide impact. *International Journal for Academic Development*, *25*(2), 134–146. https://doi.org/10.1080/1360144X.2019.1631170

Forsyth, J., & Cowap, L. (2017). In-house, university-based work experience vs off-campus work experience. *Higher Education, Skills and Work-Based Learning*, *7*(3), 229–239. https://doi.org/10.1108/HESWBL-11-2015-0054

Gill, R. J. (2020). Graduate employability skills through online internships and projects during the COVID-19 pandemic: An Australian example. *Journal of Teaching and Learning for Graduate Employability*, *11*(1), 146–158. https://doi.org/10.21153/jtlge2020vol11no1art946

Haddara, M., & Skanes, H. (2007). A reflection on cooperative education: From experience to experiential learning. *Asia-Pacific Journal of Cooperative Education*, *8*(1), 67–76. https://www.ijwil.org/files/APJCE_08_1_67_76.pdf

Halcomb, E. J., Gholizadeh, L., DiGiacomo, M., Phillips, J., & Davidson, P. M. (2007). Literature review: Considerations in undertaking focus group research with culturally and linguistically diverse groups. *Journal of Clinical Nursing*, *16*(6), 1000–1011. https://doi.org/10.1111/j.1365-2702.2006.01760.x

Hall, J., MacDonnell, J., McConnell, C., & Jones, J. (2022). Student-staff partnerships for diversifying and decolonising the higher education curriculum. *Equity in Education and Society*, *1*(3), 327–341. https://doi.org/10.1177/27526461221109870

Hollander, J. A. (2004). The social contexts of focus groups. *Journal of Contemporary Ethnography*, *33*(5), 602–637. https://doi.org/10.1177/0891241604266988

Hora, M., Chen, Z., Parrott, E., & Her, P. (2020). Problematizing college internships: Exploring issues with access, program design and developmental outcomes. *International Journal of Work-Integrated Learning*, *21*(3), 235–252. https://www.ijwil.org/files/IJWIL_21_3_235_252.pdf

Hruska, A. M., Cawood, A., Lohan, K. M. P., Ogburn, M. B., & Komatsu, K. J. (2022). Going remote: Recommendations for normalizing virtual internships. *Ecosphere*, *13*(3), Article e3961. https://doi.org/10.1002/ecs2.3961

Hughes, D. L., DuMont, K. (2002). Using focus groups to facilitate culturally anchored research. In T. A. Revenson, A. R. D'Augelli, S. E. French, D. L. Hughes, D. Livert, E. Seidman, M. Shinn, & H. Yoshikawa (Eds.), *Ecological research to promote social change* (pp. 775–806). Springer. https://doi.org/10.1007/978-1-4615-0565-5_11

Irwin, A., Perkins, J., Hillari, L. L., & Wischerath, D. (2022). Is the future of internships online? An examination of stakeholder attitudes towards online internships. *Higher Education, Skills and Work-Based Learning*, *12*(4), 629–644. https://doi.org/10.1108/HESWBL-05-2021-0102

Jackson, D. (2018). Developing graduate career readiness in Australia: Shifting from extra-curricular internships to work-integrated learning. *International Journal of Work-Integrated Learning*, *19*(1), 23–35. https://www.ijwil.org/files/IJWIL_19_1_23_35.pdf

Jackson, D., & Wilton, N. (2017). Perceived employability among undergraduates and the importance of career self-management, work experience and individual characteristics. *Higher Education Research & Development*, *36*(4), 747–762. https://doi.org/10.1080/07294360.2016.1229270

Jeske, D., & Axtell, C. (2014). e-Internships: Prevalence, characteristics and role of student perspectives. *Internet Research*, *24*(4), 457–473. https://doi.org/10.1108/IntR-11-2012-0226

Jeske, D., & Linehan, C. (2020). Mentoring and skill development in e-internships. *Journal of Work-Applied Management*, *12*(2), 245–258. https://doi.org/10.1108/JWAM-09-2019-0028

Kay, J., Ferns, S., Russell, L., Smith, J., & Winchester-Seeto, T. (2019). The emerging future: Innovative models of work integrated learning. *International Journal of Work-Integrated Learning*, *20*(4), 401–413. https://www.ijwil.org/files/IJWIL_20_4_401_413.pdf

King, M.A., & Sweitzer, H.F. (2014). Towards a pedagogy of internships. *Journal of Applied Learning in Higher Education*, *6*, 37–59. https://bit.ly/3nK8Jer

Kraft, C., Jeske, D., & Bayerlein, L. (2019). Seeking diversity? Consider virtual internships. *Strategic HR Review*, *18*(3), 133–137. https://doi.org/10.1108/SHR-12-2018-0100

Kuh, G. D. (2008). *High-impact educational practices: What they are, who has access, and why they matter*. Association of American Colleges and Universities.

Martz, W. B., Jr., Repka, T., Kramer, J., & Reale, F. (1999). On-campus electronic internships: Implementation and experience. *Journal of Cooperative Education*, *34*(3), 18–24.

McHugh, P. P. (2017). The impact of compensation, supervision and work design on internship efficacy: Implications for educators, employers and prospective interns. *Journal of Education and Work*, *30*(4), 367–382. https://doi.org/10.1080/13639080.2016.1181729

Mercer-Mapstone, L., Banas, K., Davila, Y., Huston, W., Meier, P., & Mekonnen, B. (2021). 'I'm not alone': Outcomes of a faculty-wide initiative for co-creating inclusive science curricula through student-staff partnership. *International Journal for Academic Development*. Advance online publication, 1–14. https://doi.org/10.1080/1360144X.2021.1988618

Morgan, D. L., & Krueger, R. A. (2013). When to use focus groups and why. In D. L. Morgan (Ed.), *Successful focus groups: Advancing the state of the art* (pp. 3–20). Sage Publications. https://doi.org/10.4135/9781483349008.n1

Moriña, A., & Biagiotti, G. (2022). Inclusion at university, transition to employment and employability of graduates with disabilities: A systematic review. *International Journal of Educational Development*, *93*, Article 102647. https://doi.org/10.1016/j.ijedudev.2022.102647

Office for Students. (2018). *Regulatory notice 1: Access and participation plan guidance for 2019–20* (Report No. OfS 2018.03). https://www.officeforstudents.org.uk/media/1093/ofs2018_03.pdf

O'Neill, N. (2010). Internships as a high-impact practice: Some reflections on quality. *Peer Review*, *12*(4), 4–8. https://bit.ly/3KySsBZ

Pretti, T. J., Etmanski, B., & Durston, A. (2020). Remote work-integrated learning experiences: Student perceptions. *International Journal of Work-Integrated Learning*, 21(4), 401–414. https://www.ijwil.org/files/IJWIL_21_4_401_414.pdf

Ranabahu, N., Almeida, S., & Kyriazis, E. (2020). University-led internships for innovative thinking: A theoretical framework. *Education + Training*, 62(3), 235–254. https://doi.org/10.1108/ET-02-2019-0031

Roy, J., & Sykes, D. (2017). A review of internship opportunities in online learning: Building a new conceptual framework for a self-regulated internship in hospitality. *International Journal of E-Learning & Distance Education*, 32(1), 17. https://www.ijede.ca/index.php/jde/article/view/1027/1678

Samra, R., Waterhouse, P., & Lucassen, M. (2021). Combining and managing work-family-study roles and perceptions of institutional support. *Distance Education*, 42(1), 88–105. https://doi.org/10.1080/01587919.2020.1869530

Stentiford, L., & Koutsouris, G. (2021). What are inclusive pedagogies in higher education? A systematic scoping review. *Studies in Higher Education*, 46(11), 2245–2261. https://doi.org/10.1080/03075079.2020.1716322

Twining, P., Heller, R., Nussbaum, M., & Tsai, C-C. (2017). Some guidance on conducting and reporting qualitative studies. *Computers & Education*, 106, A1–A9. https://doi.org/10.1016/j.compedu.2016.12.002

Waizenegger, L., McKenna, B., Cai, W., & Benz, T. (2020). An affordance perspective of team collaboration and enforced working from home during COVID-19. *European Journal of Information Systems*, 29(4), 429–442. https://doi.org/10.1080/0960085X.2020.1800417

Ward, C., Topham, T., Dixon, H., Peterson, A., Rieder, J., Duffin, B., & Coburn, J. (2022). Culturally inclusive STEM learning: Mentored internships for Native American undergraduates at a tribal college and a university. *Journal of Diversity in Higher Education*. Advance online publication. https://doi.org/10.1037/dhe0000413