VocTech Challenge: Levelling up learning

How can VocTech help address the growing digital divide?

Reflections on a year of implementation

Contents

1. Summary

This VocTech Challenge looks at levelling up learning and how VocTech can help address the growing digital divide.

It is now a full year since the projects in the VocTech Challenge 2021 cohort began their work. It is an appropriate moment to pause and reflect on the lessons learned so far and how the whole Challenge ecosystem is delivering results.

Our VocTech Challenge programmes are not just about grants. They use all our resources and influence to address the issues, drawing on our Strategic Partnerships and our Advocacy work to create an ecosystem of activities all with the same focus, to see if a deep dive into the problem area can create new insights and solutions.

As well as reporting on the progress of our grant funded projects, this report looks at the work of our Strategic Partners the RSA, ALT and iDEA in using their wider networks to explore the ideas underpinning the Challenge and our collaboration with NCFE on Innovation in Assessment.

Over the course of the Challenge, we have added to the team as Ufi's advocacy and partnership building has brought new ideas and organisations into the mix, sharing their expertise and new perspectives on the issues we are addressing.

What have we learned? You will draw your own conclusions from the stories in this report, but perhaps our strongest take-away messages so far are that:

- Technology provides a 'safe space' where those furthest away from learning can gain and improve skills without being judged. They can keep trying again and again until they get it right without anyone else knowing or 'criticising'.
- Technology provides a flexible and accessible way for people to learn skills and automatic 'nudges' can keep people engaged and provide encouragement and motivation.
- Tech can be transformative. There is a 'you're worth it' factor to using tech for those furthest away from learning. These individuals may have had poor school experiences and can internalise an 'I'm not worth it' ideology that well designed, non-judgemental tech can transform.
- For those furthest away from learning, with the lowest confidence and motivation, tech can only be a part of a wider supportive network. The scaffolding (referred to later in the report) is a vital part of supporting these people to make progress.
- The lowest-tech solution, done really well, can often be the best solution to start with.

We hope that you find this update interesting and valuable in stimulating thinking on how we address the issues facing those most at risk of being left behind by the digital divide and the lessons that offers us as we seek to address the economic challenges of UK skills shortages.

Our overriding insight thus far is that this is about a person-centred approach. The technology may be the disruptor that allows us to do things differently, but in addressing the confidence and motivation of learners across a wide spectrum of geographies, subjects and skills, the key to progress remains in empowering people to have agency in their own lives.

2. Introduction – what is a VocTech Challenge?

Ufi offers most of its grant funding on the basis of open calls, where we invite innovators and developers to bring their ideas to us for how to improve skills development that help us all to have more fulfilling working lives. Through this process, we support a wide range of interventions across all sectors and geographies of the UK, mostly focused on the early proof of concept stage to develop MVP (Minimum Viable Product) systems that give insight into the power of digital to change lives.

Our VocTech Challenge programmes are different. We focus in on a specific issue that often arises from our experience of working with our projects or our Strategic Partners and explore what Ufi can do to address this economic or societal problem. Our first Challenge in 2017 spotlighted manufacturing and the requirements for new skills as industry transforms. Our second in 2019 took those issues wider to look at what skills generally will be needed for the 21st century workplace. The rapid changes brought about by the pandemic and our experiences with VocTech Now gave us our focus for the 2021 Challenge as we saw how those previously furthest from learning and work were being even more excluded as more digital learning became the norm. This VocTech Challenge programme looked at Levelling up learning and how VocTech can help address the growing digital divide.

Our VocTech Challenge programmes are not just about grants. They use all our resources and influence to address the issues, drawing on our Strategic Partnerships and our Advocacy work to create an ecosystem of activities all with a shared focus, to see if a deep dive into the problem area can create new insights and solutions.

Using design thinking[1], the first phase of Challenge is to undertake Discovery work to test our hypothesis and our assumptions, gathering as many perspectives as we can from those closest to the problem. The second Define phase reflects on what we have discovered and creates a clear 'problem statement' that we can explore.

Our Challenge problem statement became:

> *"How can VocTech – technology to support adult vocational skills - improve outcomes for people most impacted by the digital divide and at greatest risk from the long-term impact of the pandemic on access to training and jobs?"*

The third part of the design process is Development. Here, we created a grant call with specific characteristics we hoped would ensure the end user was front and centre of all the work undertaken. We also set in motion several projects with our Strategic Partners and other key stakeholders to look at the wider landscape that our initial discovery had indicated was not yet well enough understood for effective policy interventions to be created to address the issues.

Which brings us to the purpose of this update – to share where we are on the final stage of the Challenge – Delivery. All of our grant funded projects are now in delivery, two of the reports are now complete and others are well on the way to creating some interesting new insights. As part of our commitment to evaluation of our work, this seemed like an appropriate moment to lift our heads from the work of delivery and recognise the achievements to date and the ongoing themes that our partners and projects are tackling.

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[1] https://www.designcouncil.org.uk/our-work/skills-learning/tools-frameworks/framework-for-innovation-design-councils-evolved-double-diamond/

3. About Ufi

> Ufi vision: To create a world where vocational skills are celebrated and valued by all as the engine upon which the UK economy is built and where the development of those skills is made possible by the best technology solutions, providing easier access, greater opportunity and better outcomes for all.

There are four fundamental pillars that underpin our Theory of Change – the levers that we can pull to create lasting behavioural and cultural shifts that create a better future for all. Our strong, independent voice and flexible funding mean that we can bring expertise, insight, and resources to tackle the challenges we have identified. We do this by applying the core principles of our strategy, Learning Without Walls: Beyond 2020, to everything we do:

- We champion the power of technology to improve skills for work and deliver better outcomes for all.
- We act as a funding partner and essential friend to innovators in skills development, looking to help people progress in the workplace.
- We catalyse a fundamental shift in how individuals, employers, and UK society view, embrace and benefit from vocational skills development through digital innovation.

As you would expect from Ufi, our approach to the Green and White Papers that underpinned the Challenge were not as an academic exercise, but as a practical mechanism to address what are very wide-reaching societal issues. Having looked across the whole landscape, they provided a means for us to bring our focus back to what is ours to do within the context of our mission.

Whilst it is tempting to step into trying to 'fix' some of the wider issues that our discovery phase has highlighted, it is important that we focus on our core mission. This means that everything we fund or advocate for must be focussed on:

- Adult learners (from age 16 right through to retirement).
- Vocational skills – the skills a person needs for work, whatever they may be.
- Tech for Good – where technology can have a significant positive impact on learner outcomes and for society as a whole.
- Those sectors, geographies and communities that are under-served or left behind from mainstream provision.

From all the responses and ideas, we created the VocTech Challenge: Levelling up learning as well as adding to our planning process ideas that need further exploration for medium- and longer-term implementation. Some of those you can see reflected in our revised Theory of Change, updated to reflect better what we as an organisation now deliver and what we have learned over the last five years.

4. VocTech Challenge grant funding call

The VocTech Challenge 2021 grant call was designed to focus on improving access to skills and employment for learners where there is a strong likelihood that, without positive intervention, they would remain excluded or would be at significant risk of being 'left behind'.

We were interested in those groups that were least likely to engage with learning to understand the drivers and barriers that they faced. Particular risk factors for digital and economic exclusion included low skill levels, low-wage employment or unemployment, remote geography, industry sector restructuring, and workers in the gig economy.

We offered VocTech Activate Grants of between £15k – £50k to test early-stage ideas and VocTech Impact Grants of between £100k – £150k for VocTech solutions which could deliver benefit to a large number of learners.

Projects were asked to focus on building the confidence and motivation of people most impacted by the digital divide to be more active and independent learners. This grant call was advertised as not being about a subtle improvement in offer, but rather about creating a step-change in improving confidence and motivation so that increased learner confidence leads to better outcomes for the learner, for the employer and for society as a whole.

To achieve this, we expected projects to bring together learners and employers alongside the development team. There were a number of current and emerging technologies that could be developed or deployed to improve accessibility, create a supportive learning environment, offer increased personalisation and motivation to start or keep on learning. User-centred approaches to learning design were important and we prioritised projects that showed commitment to our design thinking approach in being open to the real lived experiences of users – our view is that designing well for learners with additional or complex needs improves the universal offer.

The key criterion was the ability of the applicant(s) to work closely with a defined community of learners who are most at risk of digital disadvantage. This was not a call for speculative technologies developed in isolation of the user group. The users would define the need, be part of the solution development and be the natural first test group for the ideas generated.

Fifteen projects were funded, 8 Activate and 6 Impact, all programmed to start at the end of 2021.

4.1   Process

Each of the projects completed a Define phase where we asked them to test their assumptions with their user groups to make sure what they were proposing really met the actual needs of the learners that they were focusing on. We allowed for two months at the start of the project for this to be completed before they completed their official project plans, to ensure that a clear 'problem statement' had been created that would give them the best chance of success.

The reality of using design processes is that they can often throw up issues that you were not expecting. Many of our projects took longer than the planned two months to arrive at their final definition of the work that they wanted to complete using our funding. One of the benefits of Ufi funding is that it is flexible and patient, and can accommodate significant pivots in focus, within the envelope of our mission and the boundaries of the grant call.

In this case, several of our projects needed to make quite substantial changes due to planned partners not now being available, new learning about the nature of the challenges faced by their learners or finding that their initial assumptions were sufficiently off the mark to make carrying on as originally planned unsustainable. It's not uncommon for that to happen with funded projects. Ufi's view is that we should plan for those 'known unknowns' to be explored in a positive way rather than firefighting the changes later.

All projects were in full delivery by the end of summer 2022 and we had the opportunity to meet with the teams for a first full cohort meeting in October, with several of our Strategic Partners as well as Jisc and NCFE joining the group to share experiences.

4.2 The Define Phase

Within the two months (+) of the Define Phase, projects were supported by a mentor to help them to frame the questions that they needed clarity on. These varied across the projects depending on their backgrounds and levels of prior experience.

All projects took time to engage with users, employing a variety of engagement methods and using some very interesting design-led tools to try to get to the real lived experience of end users. Many also explored the commercial and sustainability aspects of their ideas, doing more work on what competition existed in the market to ensure that their idea was novel and groundbreaking.

Several projects were managing complex discussions with stakeholders, potential customers, learning providers and other professional agencies involved in delivering services to users, as well as the end users themselves. It was likely that the ultimate solutions would need to blend into a complex landscape of user support. Taking this early time to make sure that everyone was clear on the prize at the end was critical to success.

It is fair to say that for many of the projects, the Define Phase was at times uncomfortable. They had applied in good faith with excellent ideas which Ufi clearly supported and now they were being asked to go back to the drawing board and look at everything again. For some, it was a simple process of re-confirming the planning they had already done. But for the majority, the work turned out to be valuable, and in some cases transformative, in how they ultimately approached the design and delivery of the project.

Some quotes from the projects' Define Phase reports and from their Project Account Managers highlight their experiences:

> "These one-to-one meetings allowed open and honest discussion, enabling us to scope the project and design the pilot. It was beneficial in getting issues out in the open before moving into the development phase."

> "The research findings identified the need to: Narrow the scope of the life and work skills to those it is feasible to cover; Ensure the activity and app are aimed at an appropriate English and Maths skills level (Entry 3/Level 1) and that specific learning difficulties including dyslexia and autism are likely within the target market; the low confidence levels of the user group, and that there are likely to be mental health issues."

> "By testing their proposition with low-fi sketches / post-it notes, and verbal walkthroughs, despite polite feedback, they realised what they had planned

to develop wasn't going to meet their learners needs. I was most impressed by their courage to throw it all away and pivot."

"[We received] much more nuanced feedback from learners - they are happy to see what they get wrong so they can work on it, but it needs delivering in the right way and to be set in a broader context of progress so it doesn't de-motivate them."

"These findings will also have a major impact on our final product scoping as we aim to build a product that FE colleges/ITPs will love using. By understanding the strengths and weaknesses of our competitors we can assure that our product is the best on the market. It is also interesting to note that the current reporting features by competitors are not being used by colleges/ITPs, we want to ensure that our reporting features are intuitive and are being used in an effective way to help both learners and staff."

For Project Account Managers (PAMs) and Mentors, the most exciting moments were when 'lightbulbs' went on and the participants could see a new way forward. We had regular catch-ups of the mentoring and PAM team so that we could learn lessons as we progressed and a final review of the process to enable us to improve it for future cohorts. It's only fair that Ufi should follow the same processes as we ask of our projects. The insights from the process will inform our next Challenge.

4.3 Focus on learners

We were aware that the Challenge we had set, focusing on those most at risk of digital exclusion, was going to be a difficult one to address. As one participant in the cohort workshop noted, these learners are not all hard to reach, it is just that the will and the resources are not usually there to allow providers to spend time with them where they are in their day to day lives. With the right engagement models, many of these projects are hoping to change that.

One of the biggest take-aways for Ufi from the cohort workshop was that we had, as we had hoped, encouraged organisations to apply that were deeply embedded within their learner communities. The level of personal commitment to the users was palpable in the room when they were all together. They were a trusted part of the ecosystem and had direct access to be able to hear from the lived experience of the users themselves. In some cases, the key input was from learning professionals that supported the users, exploring what tools they needed to make the user experience better[2]. In others a multi-agency approach was adopted, bringing an incredible

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[2] See ALT report where similar findings were discovered

range of support partners to the table to see how they could co-design a solution.

Several of the projects did work on user personas[3] which enabled them to determine which users they would be able to help in this first phase of their work and where future development might be needed to widen access to their solution. Most engaged in 1-2-1 and group sessions using open questions to explore their reactions to potential learning solutions and testing with simple wire-frames or other products already on the market from competitors to see if the tech chosen was the right one for this user group. A wide range of engagement and UX techniques were used, from 'brainwriting' to make sure all voices were heard to the creation of vast Miro or post-it boards tackling the issues from different perspectives. The common theme was active engagement, making sure assumptions were being thoroughly tested.

The end of define phase reports hold a wealth of new data and insights on the issues that we were trying to address and will give us a baseline on which to evaluate the positive change that the projects are able to effect.

From the work done so far, there are some interesting themes emerging around how these learners think and feel and how engaging with learning and work can be for them as an experience. These themes are strongly reflected in the research done by ALT and RSA and reported on later in this document.

Some comments from the projects illustrate the types of confidence and motivation issues that they are addressing and the wider social policy context that they highlight.

> "Perhaps most importantly, taking an active role in our learners' journeys allows us to directly address the purpose of the VocTech challenge, with consistent messaging which directly addresses learner confidence at each stage; and regular follow-ups from an extended team of coaches, mentors, and technical experts providing high quality professional, technical, and personal advice helping to further build each learners' confidence. Our solution is the '99% invisible glue layer' which supports our highly social, informal, industry-centric learning programme."

> "Work can feel an unimaginably long way off, so we want to start by taking small steps to making them feel comfortable in a work environment, from knowing how to dress appropriately and making cups of tea, to having difficult conversations and time management."

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[3] See also RSA report

"Not all barriers are equal, for example an intrinsic challenge such as lack of confidence is different from an extrinsic issue due to lack of available time because of having to work multiple jobs to pay the bills. The dynamic between barriers and enablers is also complex. In some cases, a single enabler (a highly supportive friend) was sufficiently powerful to have offset several barriers despite not being a direct remover of those barriers." [4]

"This means that there is an increased emphasis on two things: the first is an even greater need to address those furthest from the job-market, as a national priority; the second is the need for continuing personal development for both the unemployed and the 'working poor'."

"[Having access to] the right support by the right people at the right moment is massive. Having these different support organisations being able to collaborate with each other would be amazing".

It is clear at this stage that the themes of confidence and motivation have been baked into the project plans for the delivery phase. In the workshop, the Cohort Manager reminded everyone that it is important to look up from the daily activities of delivery to ensure that the wider objectives of the Challenge are being met. In this cohort, that seems to be happening by default as the focus of their work is in such clear alignment.

4.4 Focus on projects

One of the differentiators of Ufi funding is the engagement of a Project Account Manager (PAM) to be a critical friend to the project throughout the process. Working on a 'have you thought about' model, which ensures that all decision making is clearly done by the project, not the PAM, their role is to guide and support.

This also means that the PAM gains real insight into the project teams and their approach and Ufi can learn from each experience individually. As part of this mid-term review, we asked the PAMs for their reflections on what had most impressed them about the projects so far. This is a selection from their responses:

"[Impressed by the] relentless determination to involve those who need to be involved: prisoners, ex-prisoners, other stakeholders etc. This in the face of the most severe security restrictions."

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[4] This directly reflects the RSA report findings

"An organisation who aren't afraid to look at how the big picture can be changed without losing focus on the day-to-day needs."

"[Impressed by] their tenacity and ability to pivot, as well as thoroughness and attention to detail. Have a very clear view of all the elements needed around the tech."

"What's impressed me is the way that they've used technology more as emotional support than for training. Being shown that "cool stuff" is for these learners obviously has a very powerful effect."

"Their ability to manage a complex tech development with external partners is exemplary. This is through strong project management skills and excellent networking/partner engagement."

The range of learners being supported is very broad, including healthcare assistants, 16+ students retaking foundational GCSEs, those who have experienced the care system or the criminal justice system, jobseekers, young adults at risk of becoming homeless, young parents and people with mental health challenges. Industries and subjects covered include construction, digital industries, textile industry and a number of approaches to improving foundational skills including maths. Technologies employed range from cutting edge AI, VR and AR, through learning and management platforms to the less high tech but vital deployment of innovative approaches to coaching, mentoring and developing champions. The combination of these approaches will give us much to evaluate at the end of the cohort.

One of the differentiating issues for this cohort is that the degree of 'scaffolding' support that these learners need to engage with learning is significantly higher than we have seen before in a group of projects. By scaffolding we mean the wrap around support from other supportive bodies/people needed to ensure that learners take the first step towards learning, and then that they have the digital skills and confidence needed to be able to access and benefit from the learning or support. It's this 'prequel' to successful learning that is most often missing and one of the reasons these learners remain at risk of falling behind. We are seeing a variety of approaches to providing this additional support, which these projects are ideally placed to explore given their closeness to the learners. In most cases for these projects, the tech is less the star of the show than their approach to coaxing, facilitating, supporting, encouraging and enabling access to whatever tech is being used.

Both the RSA and ALT reports pick up on these issues and we are seeing some common points that we will be able to explore at the end of the process.

The cohort process is a valuable one as it allows issues to emerge that are bigger than the projects individually. In the case of the VocTech Challenge grant fund 2021 cohort, it is noticeable at this early stage that there are also differing needs for Ufi 'scaffolding' support for projects depending on the background of the applicant.

It is not true in all cases, but in general we are finding that those organisations that have the closest links to users as community builders or service providers are needing to focus hardest on the long-term sustainability and commercialisation aspects of their thinking to enable them to ultimately reach scale. They are incredibly knowledgeable about their local user group but have limited experience outside that immediate scope.

On the other side, the more commercially focused organisations are finding it easier to see how and where the idea will scale up and are having to spend more time to really engage with their initial user base to ensure that they really understand their lived experiences.

All projects working with external stakeholders have found that challenging, in the context of an economic climate in which resources are particularly scarce and a number have had to think of ingenious ways to pivot their services to reach their target audiences when their intended route to market has been disrupted by lack of capacity in their preferred partners.

What binds them all is a strong commitment to drive change in their respective fields. We specifically stated in the briefing for the grant fund that we did not want proposals for technology that were not deeply embedded in user experiences and designed with them in mind. We have certainly, with this cohort of projects, exceeded our expectations in the depth to which they are committed to serving their end users.

4.5 Next Steps

All the projects are now 'in flight' and delivering against their project plans. With monthly catch-ups with their PAMs and opportunities for enrichment to help them build their key messages, manage their IP and develop a strong evaluation plan, as well as bespoke enrichment where PAMs agree that there is a gap in their knowledge or expertise needed to take the next step, we hope that our 'best chance of success' model will see all of the projects reach a successful conclusion. For the Activate projects, that will be a working MVP with ambition to scale. For the Impact

projects, that will include roll-out and significant user testing in the field. The combination of both allows this cohort to both bring new ideas into the market and demonstrate the art of the possible.

5. Projects and reports

As noted in the introduction, our VocTech Challenge programmes are about more than just the grant funding that we award. It is about creating an ecosystem of engagement that allows us to dive more deeply into the issues that we are focused on. Ufi's Strategic Partnerships with key organisations across the sector are an important part of our wider work and we draw on them extensively within Challenge. Their wider reach, specialist knowledge and differing perspectives bring a new dimension to the investigations that we are jointly undertaking. We also bring in other expertise from organisations in the sector with whom we work closely and have expertise and insight to offer on the issues. In summary, this is a team effort with Ufi as the convening hub to pool our resources and our expertise in pursuit of new knowledge.

We created 'Challenge Central' at the start of the process to continue the open dialogue that had been a feature of the green and white paper process. All projects and partners came together to ensure that there was understanding of what aspects of confidence and motivation were being looked at, by whom and in what context. Over the course of the Challenge, we have added to the team as Ufi's advocacy and partnership building has brought new ideas into the mix. The old saying that 'the whole is more than the sum of the parts' certainly applies here.

A snapshot from the Miro board created for Challenge Central shows the scale of what we are trying to achieve here, the reach of the partnerships and the timeline over which it is running.
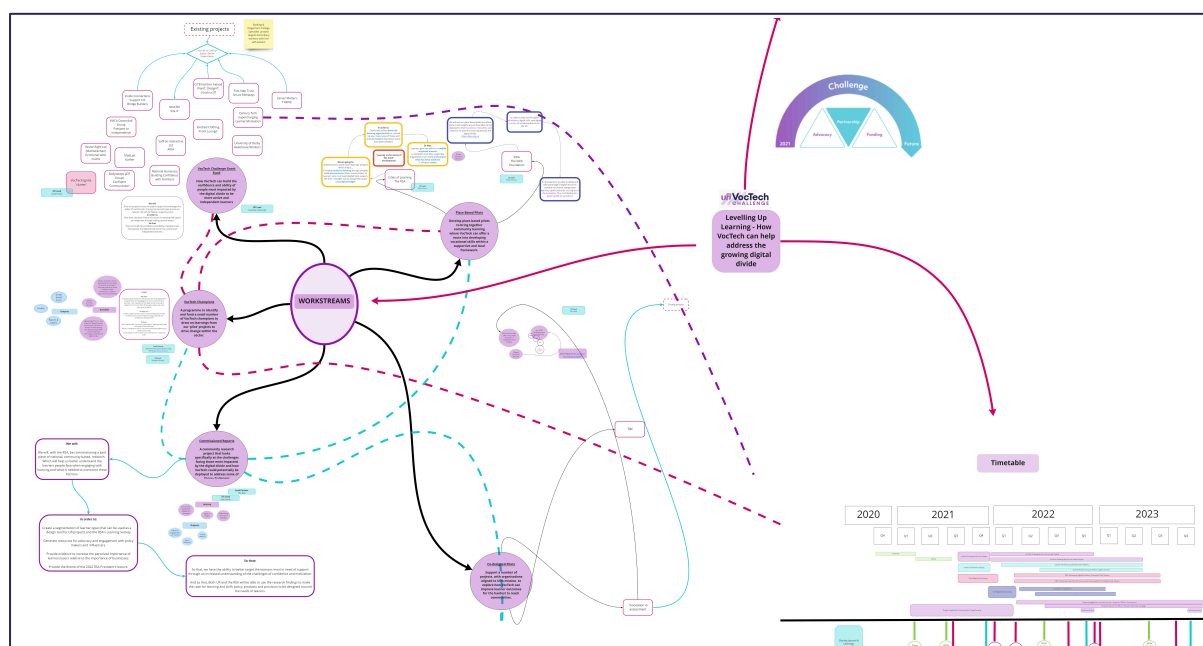
Through Challenge Central we were able to engage projects and partnerships into dialogue that led to some of the research findings highlighted below. Strategic partners and key organisations also participated in the cohort workshop to deepen mutual understanding of the challenges and look for shared solutions. Some of the conversations on the day of the workshop were groundbreaking in opening understandings for both parties.

The following sections report back on some of the work now under way or completed by our partners under the umbrella of VocTech Challenge: Levelling up learning.

5.1 The RSA

Ufi and the RSA (royal society for arts, manufactures and commerce) have collaborated on two projects since 2021 that feed into the VocTech Challenge ecosystem.

5.1.1 Rebalancing Adult Learning

In 2021, the White Paper promised to research the "challenges facing those most impacted by the digital divide" and understand how we can better design learning and use digital tools to overcome confidence and motivation barriers. Working in partnership with the RSA we have been able to produce an actionable series of

recommendations that provides concrete steps for policy makers, businesses, educators, and UK society as a whole.

The RSA and Ufi's research aim was to develop a deeper understanding of what might encourage learners to take up opportunities and overcome potential barriers, and provide practical recommendations that can influence future policy, programmes and product or service design. Simply put; the more people we can engage in learning, the more chance we have of meeting societal skills needs. This report shows some ways in which that might be achieved.

The report covers a wide range of aspects relating to the learning challenges of those not currently well served by mainstream provision and begins a dialogue with those who left learning at 16 to find out why they disengaged with learning. There are some fascinating insights into some of the underlying barriers and motivations and actionable learnings that can be used to influence future development.

The team looked at Confidence to learn, Barriers to learn, Motivation to learn and Triggers to learn within our target audience. As could probably have been expected they confirmed that "learning begets learning...The more highly educated adults are, the more likely they are to continue with adult education and learning." The whole system needs to recognise that it doesn't work for a significant proportion of learners and that things need to change so that everyone can find a way to engage in lifelong learning.

Some highlights from the report that resonate strongly with the other interim findings from our projects include:

Learner motivation is triangulated between three 'capitals' earned by learning: identity capital, social capital and human capital. Those furthest away from learning and work have first to develop an idea of themselves as a capable and competent learner before being able to actually engage in learning. Universal access to foundational skills is critical to addressing the current skills crisis as not being confident in these precludes further learning. The social dimension is hugely important – the 'if you see if you can be it' principle applies here and our focus learners particularly benefit from that kind of social validation of their choices. The human capital of knowledge, skills and qualifications relies on the other two being in place before it can successfully be built.

Both the qualitative and quantitative research suggests that calls to action to fill skills gaps that are solely around routes to work and skills for jobs will not speak to the motivations of potential learners. Commitment to learn comes from the desire for greater agency over one's future and improved social interactions. This was also

highlighted by Andy Haldane, CEO of the RSA in his conversation with Ufi Chief Executive Rebecca Garrod-Waters during the [Week of Voctech 2022](#). Andy spoke eloquently of the need not to get hung up on 'hard skills' or 'soft skills' as all skills are ultimately hard work to acquire and it is the invisible characteristics of creativity and innovation, resilience and tolerance, empathy and negotiation that are needed both in life and in work.

Barriers to learning are often divided into three categories: situational, institutional and dispositional. Situational barriers arise from an adult's personal and family situation, such as time pressures and financial constraints. Institutional barriers arise from the unresponsiveness of educational institutions or a lack of flexibility in the provision on offer, such as inappropriate scheduling or content of provision. Dispositional barriers relate to the attitudes, perceptions and expectations of adults, such as believing that they are too old to learn or lacking confidence or interest. These findings are triangulated by the Define phase experience of several of the Challenge grant funded projects.

The report also delves more deeply into some of the disruptors to learning – road bumps and friction. Barriers are not simply one-time hurdles to be jumped. For many people these barriers constitute a headwind to learning that must be navigated throughout the duration of a programme of adult learning. Our qualitative research showed that frequently the road bumps learners faced were not just to initiating a course, but to completing it without being knocked off course. An illness, a change in childcare provision, a temporary increase in working hours – these events were enough to prevent learners from keeping up with the progression of their learning and frequently prevented them from re-joining the learning programme. Friction was described when people with low confidence or conflicts of interest can be easily put off from pursuing their learning ambitions. The team heard stories of people giving up plans for reasons including: the right course was on the wrong day, the forms were too complicated, routes to funding were unclear or the college was perceived as unwelcoming. Again, this strongly reflects the experiences of the Challenge grant funded projects where simply navigating life in these difficult economic times was driving people even further away from learning and work.

Towards the end of the report the team has identified seven learner personas across the full range of learning progression, which closely map onto the parallel findings of the Define phase work done by the Challenge grant funded projects. These give an excellent grounding for understanding the triggers to learning for users at different points on the learner journey.

In its conclusions, the report confirms that the RSA and Ufi believe that there is an enormous opportunity to create a learning society that can transform outcomes for learners who have not benefited from the current system. To do this we need to change how we think about learner confidence and motivation. Throughout the system, there needs to be a rethink about how learners access learning and are inspired and motivated to learn. This is backed up with a series of recommendations at a policy level and signposting to practical solutions as demonstrators for how to address the issues.

You can access the full report at www.thersa.org/reports/rebalancing-adult-learning-report-rsa-ufi.

5.1.2 Cities of Learning

The RSA and Ufi have collaborated on the development of the concept of place-based learning for several years. In the latest extension of the programme, Cities of Learning works with employers, educators, policy makers and learners to agree shared learning priorities for their town, city or region and to recognise those skills through digital badges.

The project is still 'in flight' so final conclusions will need to wait for completion. It is however clear already that the concept is developing a life of its own, with many more place-based proposals coming forward and local and regional partners seeking to leverage their geographical advantages to signpost and support learners into skills development to support their life and work chances. As with much of the work, what is emerging is that 'agency' and 'choice' are critical to confidence and motivation – being able to see a clear path between learning and their life and work goals significantly increases the chances of participation.

The RSA delivers the programme in partnership with Badge Nation, Future Creators, Navigatr and Real Ideas. Between the team, they provide solutions for organisations, networks and place-based leaders to enhance learning opportunities and bring expertise in strategy, research, digital badging and platform development. The principles of badging and micro-credentials are fundamental to allowing learners to see their progress and remain motivated to continue.

Cities and regions already running the Leadership Programme include Brighton, Plymouth, Southampton, Cambridgeshire and Peterborough, Belfast, Bradford and Tees Valley. The defining feature of each scheme is that they have strong local knowledge of what is needed in their local area and can collaborate to build learning pathways for those who want to achieve life and career goals.

You can explore the programme at www.thersa.org/cities-of-learning.

5.2 Association for Learning Technology (ALT) Amplify FE Report

As well as the wider Strategic Partnership that Ufi has with ALT in developing strong communities of practice for the adoption of digital learning across the vocational learning profession, a specific piece of research was undertaken as part of VocTech Challenge: Levelling up learning.

The action research offers insights into how we can best develop and deploy learning technology to support the vocational adult learners most impacted by the digital divide as they build the skills essential for life, work and future learning.

Over a period of six months the ALT team of researchers carried out 1-1 interviews with key design project staff and members of communities who have developed or leveraged learning technology and digital tools for vocational learners; examined project outputs and reports from successful, established projects and explored the perspectives of learning technology design teams, the educators and employers deploying the technology and the learner end-users.

The full report can be read at www.amplifyfe.alt.ac.uk/research

The following summary picks up some of the highlights that are in line with the wider Challenge findings.

5.2.1 AmplifyFE report findings

Regardless of the project team type and vocational scenario a 'learner-centred, co-design model' for innovation is most effective. The learner community's needs and purposes must lead innovation and inform digital pedagogy, rather than use of 'technology for technology's sake'. Innovation is most effective when designed in close collaboration with end-user communities using extensive prototyping and feedback.

Adult vocational learners need to build digital confidence as well as competence: Adult learners have many demands on their time so need a compelling purpose to invest time engaging with learning technology. Bite-sized learning with immediate 'wins' and rewards directly relevant to their work and wider life are essential.

Successful design and deployment of learning technology for vocational learners, as the research highlights, involves articulating a passionate vision for the project to all stakeholders, engendering critical curiosity in the design team, putting the

learners' needs at the centre of a co-design process then engaging with vocational educators and their supporters to empower them to 'glimpse the possible'.

Learning designers and deployers of technology work in a problematic, challenging climate and must be mindful of the rich contexts in which vocational learning occurs.

Mature FE sector-based teams can have 'best of both worlds' positioning with direct learner and educator access, immediate experience of vocational sector needs and more developed business experience, especially after several innovation cycles. This reflects our learning from the different backgrounds of this Challenge grant fund project cohort that closeness to users and commercial sustainability are often not found in the same organisations.

The research looked at how to correctly identify end-users' needs with robust problem definitions. What they learned: Innovations stemming from a co-design process with end users, closely involving them at every design stage are most successful. It is vital to have a robust definition of the problem to be solved or need to be met. Mapping a wide range of learner journeys, clearly establishing users' needs and undertaking extensive, realistic prototyping at all design stages are key parts of this co-design process. Again, this reflects the project cohort experience and was at the heart of what we asked all projects to consider in their Define phase.

Accessibility and inclusion should be essential, core parts of the design process from the outset. A mixed media, dual-coding approach blending images, video, audio and overlaid text will be engaging for users, accessible for the widest possible audience and aid in clarifying key principles and demystifying jargon. All designs should reflect a wide range of user types in terms of images, voices and learning scenarios including a mix of ages, ethnic backgrounds, regional accents, abilities and family, work and social scenarios enabling all learners to feel represented.

Project directors, designers, and indeed team members, tell us that the key levers powering technology innovation in organisations are cultural rather than operational. Chief amongst these is ensuring that design teams apply critical curiosity to the creative process as well as to the learning technology products they create. The report also highlights the critical importance of organisational senior management support for innovation.

The final, key piece in the jigsaw of effective leveraging of learning technology in vocational education is securing the buy-in and enthusiasm of vocational educators. Educators are work and life role models to learners and their attitudes to technology have significant impacts on the groups they work with. Vocational educators and their colleagues such as support workers, mentors and coaches can

act as advocates for learning technology or conversely as gatekeepers preventing or limiting its effective use.

The report has two extremely useful appendices:

Appendix 1 - Mapping the Challenging Landscape of Learning Technology Design and Deployment – providing context for the FE/vocational landscape that VocTech is trying to support and the complexities of gaining access with new products and services.

Appendix 2 - Digital skills and Pedagogy Frameworks Underpinning the Research. Common themes which emerge when interrogating the breadth of these frameworks are the need for vocational learners, educators and their supporters to develop the skills to select and use digital devices and networks; source, validate, manage, analyse, edit and present information; communicate, transact and collaborate effectively in the digital domain; operate lawfully and ethically in digital spaces with inclusion in mind; manage personal and professional digital identity and wellbeing. Underpinning these core skills are abilities to analyse and solve problems, to have the confidence to experiment with and master new digital tools and networks and the reflective ability to evaluate their own performance and plan and action further development.

In the coming months, case studies from some of this Challenge grant fund cohort and others who participated in the research will be produced to show how the findings can be applied in context.

You can find out more about the wider AmplifyFE work and Communities of practice on the Ufi website at www.ufi.co.uk/strategic-partnerships/alt.

5.3 iDEA place based learning

Ufi are among iDEA's most longstanding and early supporters, having funded iDEA since 2017. Ufi's steady support over the years has helped iDEA to develop its vocational offering and to grow the project's reach and impact substantially across the UK. iDEA launched the Bronze Award in January 2017 with 30 badges available for learners to complete online (currently there are 85). The Silver Award was launched in 2018, and in 2020, iDEA re-established itself as an independent charity – Idea Foundation. Today, there are more than 1.6 million iDEA learners registered

on the platform who have completed more than 10.6 million iDEA badges and achieved over 142,000 Inspiring Digital Enterprise Awards.

Whilst most of the VocTech Challenge: Levelling up learning grant funded projects are either at proof of concept or early roll-out stage, iDEA is at a much later stage of development with its extensive range of current users. That scale enables us, in partnership, to investigate in more detail some of the deeper challenges for learners from disadvantaged backgrounds.

iDEA aims to help learners gain the confidence to find work or move-up in their work by helping them develop digital and vocational skills. The goal is for learners to be able to utilise and take advantage of digital resources available to become independent learners, upskill and enter or progress in the workplace. Their current work is intended to surface lessons and insights around how iDEA can be deployed to improve access, motivation, and retention for learners most impacted by the digital divide through place-based pilots.

The intention is to proactively reach out to organisations across the UK that support some of the most disadvantaged learners and those impacted most by the digital divide and to track learner progress for those who join the organisations on iDEA via the online platform.

iDEA is already helping learners across the UK but the plan is to grow the number of learners that iDEA supports in local authority districts that have greater proportions of the population living in income deprived households (Middlesbrough, Blackpool, Liverpool, Manchester, Birmingham, Wolverhampton) and areas where there are higher proportions of people with low digital skills, for example, Wales.

There is enormous potential for the data generated through this action research to inform the development of other projects and add to the wider policy making environment with real-life experience of those who are our core audience. Interim findings will be published early in 2023.

You can find out more about Ufi's partnership with iDEA at www.ufi.co.uk/strategic-partnerships/idea

5.4 NCFE Innovation in Assessment

A further strand of Challenge development included working alongside NCFE to see how Ufi could add value to their existing Assessment Innovation Fund.

NCFE's vision is to break the boundaries of assessment within education and promote innovation that creates robust and reliable assessment within an intelligent education ecosystem. The Assessment Innovation Fund (AIF) will be a catalyst for change by providing evidence-based, alternative assessment solutions where ideas can be tested in real-life within a supportive environment. Proposed innovations should focus on assessment that will build trust and confidence and add value to all stakeholders including learners, educators, employers and government. Approaches and solutions should be inherently fair and provide an appropriate level of 'recognisable value' to all stakeholders who have invested in learning. Our view of assessment is any activity that measures current knowledge, skills, or behaviour at any stage of the learner value chain.

This particularly links in to the findings of the Green Paper where assessment was one of the big issues for learners already struggling with confidence and motivation and is being reflected in the delivery of this Challenge project cohort, where the balance of feedback is carefully managed to show progress and signpost the need for further study without de-motivating learners.

NCFE invited application from organisations that could help to transform assessment and provide solutions that:

- *Deliver a transformational learning and assessment experience for all learners*
- *Consider meta and technical skills development to enable learners to develop agency*
- *Enable personalisation in assessment*
- *Develop an assessment system that is fair and inclusive by design and moves away from high stakes, stressful exams where appropriate to do so*
- *Provide balance and interplay of formative and summative assessment*
- *Implement technology to make assessment more readily available and fit for purpose*
- *Build a real-time picture of the impact of the learning*
- *Use data and technology in insightful and efficient ways to enable high-quality teaching, learning and assessment*
- *Use data more effectively to improve the level of perceived value of assessment processes, as a means of enabling choice and informing every stage of the learning journey.*

The list here links in closely with the findings of both the RSA and ALT reports and builds on what iDEA are finding with their approach to badging and credentialling.

Ufi were pleased that another grant funded project with Bolton College - First Pass – has been chosen to be included.

The NCFE team were active participants in our Challenge cohort workshops and the exchange of ideas and possibilities was very positive for all participants.

6. Interim conclusions

VocTech Challenge: Levelling up learning set out to address the real risk that people already disadvantaged by their past learning experiences were becoming even further disconnected by the increasing use of digital technologies. All of the strands of work generated were focused on exploring why and what solutions might be appropriate and achievable to turn this around.

What is most impressing us is how the same themes are emerging from all aspects of the activities being undertaken. Words that emerge strongly are personalised learning, user-focus, valuing all skills, creating confidence to start and motivation to continue. Technology, whilst important and something that we champion, is taking a secondary role in these projects in favour of the human exploration of how to engage and support learners effectively. Some of the solutions will be high tech. All will involve some elements of digital solutions. But the most important factor is that real user needs are fully met with the final solutions.

Both the research and experience of project delivery is showing that we need new responses to address the enduring skills gaps if the UK economy is to prosper and individuals are to have a quality of life of their choosing. Existing pedagogies and delivery work for those who are already able to succeed in an exam-oriented learning system. But this excludes a majority of learners who either struggle to 'conform' or opt-out of learning. Solving these problems offers a 'twin win' of unlocking the potential of people and places to grow economic capacity and also addresses a social justice issue of giving people a chance to flourish and have agency over their lives.[5]

We are seeing the real-time impact of the 'road bumps' that the RSA report identifies, making some users engaged with out projects even more difficult to reach as their circumstances deteriorate. But we are also seeing fantastic innovation and commitment to changing the way things are done. Projects are

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[5] Andy Haldane and Rebecca Garrod-Waters' Week of VocTech conversation expands on these ideas: https://ufi.co.uk/insights/week-of-voctech/2022/uk-skills-unprecedented-crisis-or-unique-opportunity

creating the conditions in which learners themselves have the tools with which to make choices that they didn't have before.

The network of organisations engaged with this VocTech Challenge is finding new ways to address learner needs and demonstrating that change is possible. The Challenge grant fund projects have some way to run but we are confident that, whatever their final outcome, we will have learned a great deal about the communities of learners that they are serving, which enables us better to target our resources in the future.

The stories, as they emerge, enable Ufi to add richness and depth to our responses to policy initiatives and to our regular engagement with policy makers, funders and thought leaders in the sector. In line with Ufi's relentlessly practical approach to change making, we can demonstrate that the challenges are real and that solutions are possible with the right mix of support, expertise and passion to make a difference.

Advocacy and communications are important elements of our work, to ensure the widest possible audience is aware of the potential for digital to transform the learning experience of those who need it most. Emerging from the research and project experiences are case studies of how to transform the relationship between 'teachers' and 'learners', giving end-users more agency in their learning and a greater sense of ownership whilst enabling those teachers and support teams to themselves have a positive professional experience of seeing real change effected. And new ways in which tech can be the key to unlocking new paradigms of working.

A variety of different ways in which that can be done are being put to the test. And sharing the outcomes, through for example our annual Week of VocTech, is one way we can ensure that outcomes have a positive ripple effect across the vocational learning community. Many of our Challenge projects and all our Strategic Partners participated this year and we look forward to the projects being introduced at a future VocTech Showcase.

We would like to express our gratitude to all participants for the openness and commitment to sharing that has been apparent throughout. The conversations that have been sparked go beyond our expectations. We will continue to offer Ufi's full range of resources be it grant funding, partnership building or advocacy to act on the findings of the work as they emerge.

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