LEARNING FUTURES PROGRAMME
FINAL REPORT

Digital Approaches to English & Maths

- using technology to support learners on Traineeships & Apprenticeships

The Association of Colleges in the Eastern Region (ACER)

PARTNER ORGANISATIONS

Bedford College

Cambridge Regional College

Cambridgeshire Adult & Community Learning

Essex Adult & Community Learning

Harlow College

KEITS Training Services Ltd

Mactrac

Schemeta

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Project title

Digital Approaches to English & Maths – using technology to support learners on Traineeships & Apprenticeships

Name of lead organisation

Association of Colleges in the Eastern Region (ACER)

Project summary

Our project aimed to build the capacity, capability and confidence of our FE & Skills partners to use digital technology effectively to enhance their delivery of maths and English and so improve learner outcomes on traineeships and apprenticeships. It responded to insights gained from a previous project which had explored how new technology might overcome significant challenges to improve delivery in the classroom, workplace and beyond.

Practitioners were supported through adviser visits, collaborative workshops, webinars and an open access, multimedia website to conduct explorative action research, reflect on, regularly exchange, share and evaluate emerging practice. They accessed systematic training in on line pedagogy with colleagues from the wider sector and were empowered to create and use effective blended learning and on-line resources to improve learning, communication and contact between teacher/assessor, learner and potentially employer.

By establishing dedicated multi-level partner teams with active support and involvement of technical staff, a responsible manager and a senior leader or governor/board member, the outcomes and impact of their innovative use of learning technology fed up to inform senior leadership decisions on future workforce development, resourcing and implementation. Project progress was disseminated through a specifically designed project website and through a series of regional networks to encourage wider sector involvement and participation.

Who should read this report and why

This report will interest:

- teachers, trainers, assessors and managers who wish to increase their effective use of digital technologies to enhance and improve the quality of English and maths teaching, learning and embedding in traineeships and apprenticeships;

- teachers of both Functional Skills and GCSE who are seeking creative ways, through the application of digital technologies, of improving their practice and their learners' interest and engagement in English and maths;
- workforce/staff development/HR managers and quality improvement teams who wish to develop CPD activities to increase staff competence and confidence in using freely available digital technologies to enhance their practice;
- leaders, managers and governors seeking to increase their awareness, knowledge and understanding of the potential impact the effective use of learning technologies on learner outcomes and their significance for strategic planning and decision making.

CPD resources developed

The project, working with Mactrac, produced three online CPD modules for staff:

- Module 1: focuses on the skills assessors and tutors need to offer 1:1 online tutorials.

- Module 2: explores the additional skills needed to work with groups in an online tutorial setting and looks at a wider range of video conferencing options.

- Module 3: was developed to support leaders, managers and governors in understanding the impact of digital technology on teaching and learning.

In addition the project team have created a multimedia website 'Digital Approaches to English and Maths: using digital technology to support learners on Traineeships and Apprenticeships' which sets the project in context and gives access to all of its documentary and multimedia resources.

For further information see the final resource section in this report.

Project lead contact details

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About the Association of Colleges in the Eastern Region

ACER (the Association of Colleges in the Eastern Region) has a mission to develop excellence and best practice in the further education and skills sector through:

- Insightful professional development;
- Management of events, forums and networks;
- Coordinating regional membership representation with regional and national committees, funding bodies, local, regional and national government departments and in any other capacity to help benefit, improve and promote the regional FE sector.

ACER was formed in 1993 by further education colleges in the eastern region. Embracing six counties, we are proud to provide a central source of support, development and representation to our member colleges. ACER is the regional office for the AoC in the East of England.

Our members are:

- 33 further education and sixth form colleges in and around the East of England region
- Associate members from colleges outside the region
- Admitted members from other charitable organisations

Overall there are 39 member or associate member further education and sixth form colleges, six associate member organisations and two adult education members.

Further information can be found at www.acer.ac.uk .

Members of partnership

Bedford College; Cambridge Regional College; Cambridgeshire Adult & Community Learning; Essex Adult & Community Learning; Harlow College; KEITS Training Services Ltd; Mactrac and Schemeta.

What the project set out to do and why

The project primarily aimed to build the capacity, capability and confidence of staff to use digital technology effectively to enhance their delivery of English and maths and so improve learner outcomes in both traineeship and apprenticeship programmes. Such programmes provide a significant range of challenges for effective delivery and improving quality in English and maths teaching, learning and assessment to which more extensive use of learning technologies offers potential solutions.

Traineeship programmes are relatively short and involve work placements; ability levels of learners vary widely, with many having literacy and numeracy needs and/or learning difficulties or disabilities. New ways need to be found to engage and motivate these learners in continuing to develop their English and maths skills in the classroom, work place and beyond.

A previous Traineeship Staff Support Programme project in the region had recognised that deploying learning technology and multimedia resources effectively in the classroom led to significant benefits. Much improved trainee engagement and increased confidence in English and maths learning could be achieved by satisfying the young people's expectations and building on ICT skills acquired in secondary education and through personal use of mobile technologies and social media.

Digital teaching resources offered flexibility, and could be easily and quickly adapted for effective differentiation to meet the needs of trainees with widely varying ability levels and

assistive technologies were useful to support those with literacy, numeracy and/or additional learning needs.

The use of learning technologies made it possible to "smarten up" classroom delivery of English and maths by making it more engaging and interactive. By using simple, freely available, e learning tools, outcomes for learners could be significantly improved. Digital technologies helped trainees develop positive attitudes to independent learning needed for progression to and in work or apprenticeships and laid the basis for further engagement with on-line, distance learning in the workplace.

Many apprentices equally need to continue to develop English and maths skills and solutions need to be found to enable them to do this remotely in the workplace and elsewhere. The use of technology offers the opportunity of improving the coherence of apprenticeships through improved learning, communication and contact between teacher/assessor, apprentice and potentially employer.

The project, therefore, offered partner practitioners and their managers the opportunity to develop their confidence, skills and knowledge by engaging with, exploring and sharing a range of e learning tools through collaborative workshops, webinars and on line learning modules and by conducting action research activities linked to organisational priorities.

At the same time, the project also aimed to engage senior leaders and governors to develop their awareness of the potential application of learning technologies for quality improvement in teaching, learning and assessment, as demonstrated through practitioner research and activities, and inform their strategic planning, decision making and implementation.

The process

The project invited its six partner providers to each identify:

- 2 practitioners working on traineeships and/or apprenticeships with the capacity, capability and interest to participate in collaborative CPD, conduct explorative action research, reflect on and share the skills, knowledge and impact of their use of learning technologies in the classroom/workplace to enhance the teaching and embedding of maths/English;
- A dedicated member of technical staff to trouble shoot technical issues/institutional barriers;
- A team leader from senior/middle management to be responsible for monitoring/reviewing progress, observing and evaluating practitioner/learner activities and sharing lessons upwards within their organisation;
- A FELTAG-aware, governor/board representative/senior leader interested in the application of learning technology for quality improvement in teaching, learning and assessment to ensure technical/institutional barriers are prioritised, observe and evaluate practitioner/ learner activities and share lessons learnt to inform strategic development and decision making;

- Apprenticeship/traineeship employer contacts interested in participating and engaging with practitioners and learners involved in the project.

By establishing dedicated multi-level partner teams with active support and involvement of technical staff, a responsible manager and potentially a senior leader or governor/board member, the outcomes and impact of their innovative use of learning technology would feed up to inform senior leadership decisions on future workforce development, resourcing and implementation.

Each partner provider then identified specific challenges relating to their organisation's delivery of English and maths in traineeships and apprenticeships and formulated action research plans and activities with support from the project's development advisers.

Practitioners and managers received regular support through development adviser visits and Skype, mobile and email communications. The ACER project team developed and delivered a series of collaborative, full day, CPD workshops and early morning webinars.

The first workshop session gave participants the opportunity to work together for the first time and explore, hands on, a range of useful e learning tools for content creation e.g. on line sticky boards, screencasting and QR codes and how they could be used to promote collaborative learning in the classroom, for providing feedback and creating materials for blended learning. They were also sign posted to some recommended web based resources for teaching English and maths and discussed the range of resources that they were already using. In subsequent workshops, participants had the opportunity to further develop their skills in screencasting and using Youtube, explore the use of online whiteboards in remote learning and assistive technology tools.

Throughout the series of workshops and webinars, participants were encouraged to share and exchange, reflect on and evaluate their progress and emerging practice and begin to form a sustainable, grass roots, teaching and learning community. Practitioners from different partners linked with each other outside these sessions sharing ideas and approaches and, for example, participating in Skype tutorial sessions with learners. They were also encouraged to further extend their range of skills and knowledge through participating in Learning Futures CPD webinars and associated activities and resources.

Alongside their action research activities and the series of workshops and webinars, our project partners were also invited to participate in online learning modules developed by our partner Mactrac. The first of these aimed to guide participants through the basics of setting up a video conferencing software like Skype and to introduce some of the key functionalities and the pedagogical opportunities presented by online learning whilst the second module explores the additional skills needed to work with groups in an online tutorial setting and looks at a wider range of video conferencing options and covers key features of Google Hangouts and WizIQ.

These modules helped both practitioners and managers to develop their confidence and make effective use of video conferencing for tutorials and other communications. Project practitioners were able to combine the use of video conferencing with other e learning tools such as screencasting, online whiteboards and graphics tablets.

A third module 'A digital transformation in your organisation' was then developed to raise awareness of leaders, managers and governors of implications of learning technology in the context of Feltag, its potential role in improving outcomes for learners and to inform strategic planning and decision making.

From the outset, the ACER team began to develop a multi-media website as a repository for resources developed and shared during workshops and webinars and platform for recording the challenges, action plans and progress of our partner providers and their commentary and reflections on their use of the e learning tools and resources to which they had been introduced. The open access, wordpress site provided an anchor and further support mechanism for practitioners and managers to review, revise and share their learning with other colleagues within their organisation.

The results

Challenges overcome

Our partner providers shared a number of specific challenges during the first phase of the project. These challenges and the solutions which the project provided are outlined below.

The need to expand the blended learning element of apprenticeship programmes

At the start of the project assessors and tutors across all the partner providers were concerned that apprenticeship candidates do not have much time to develop their skills in English and maths given their workplace commitments. They were, therefore, very keen to look at ways in which they could develop resources that learners might be able to access between sessions as blended learning so that they could continue to improve their skills.

Solution: Padlet and Lino it were used extensively by partner practitioners to create blended learning resources. They found these two online sticky board websites easy to use and they were keen to model their use in team briefings and workshop sessions with other staff. They felt that often resources created in this format were much more immediately accessible by learners as they did not have to go through a lengthy log in procedure.

Several practitioners found that screencasting was also a very valuable way to create video tutorials that learners could use to revise key topics between sessions. These screencasts could then be posted to a Padlet board with follow up quizzes, extension activities and model answers to create simple but effective open learning modules.

Some explored ways in which they could use a Padlet board to give learners access to their learning objectives at the start of a session with links to follow up activities. One practitioner uses Padlet not only for creating teaching resources but also to set and share personalised objectives, developing individual Padlet boards for his learners which enable them to make better progress at their own pace and frees him up to support less confident learners. Some explored the use of a website called Edpuzzle which enables them to insert quiz questions into a web-based video to create formative assessment resources

that would generate valuable data about learner performance. Again, these resources could be accessed between teaching sessions and workplace visits as elements of a blended learning programme.

The need to motivate and engage learners

Practitioners said they were keen to make their teaching much more interactive and motivating for all their learners but especially those younger learners who did not immediately see the relevance of improving their English and maths for their vocational aspirations.

Solution: Again, Padlet was used as an engaging way to capture ideas when working learners in a classroom discussion or between sessions. Tutors also found that learners enjoyed different types of student response systems like Quizizz and Socrative that can be used to create and manage a live online quiz during a session.

Several tutors found that creating screencasts could be used to give feedback to learners on their written work. This form of feedback was very popular with learners as they found it to be more personalised; several reporting that they felt much more motivated to make the corrections to their written work when they had received feedback in a screencast. Tutors for their part felt that it saved them time in writing out lengthy e mail explanations that were much less meaningful to candidates than oral explanations. Tutors also reported that it was easier to give developmental comments when they were able to qualify them through their tone of voice.

The need to update Moodle based material

Some providers already used a Moodle as a way to organise and share their teaching resources with learner but were keen to expand the number and quality of their English and maths resources and to make their web-based materials more engaging and interactive.

Solution: Providers found that sometimes a series of linked Padlet boards could provide a simple but very effective way of presenting blended learning materials to learners who had previously been reluctant to access Moodle based material. On the other hand, other providers like Bedford College used the project to develop and expand a dedicated section of their Moodle to contain a much wider range of learning resources in English and maths that were more interactive and could be tracked efficiently when used by remote learners. Some providers also found it useful to be able to embed their Padlet boards on to their Moodle pages to make them more colourful and interactive. One provider has explored the use of Edmodo in the delivery of a Level 3 Award in Teaching Mathematics through blended learning.

The need to offer remote support

Given the distances that assessors have to travel to visit apprentices, they were also interested in exploring the use of screencasting and Skype video conferencing to reduce travel time but still maintain and potentially improve regular tutorial contact with their

learners. They also wanted to learn how to use digital technology to make their group teaching sessions more engaging and effective.

Solution: Practitioners from KEITS, Essex ACL and Cambs Regional College have valued the benefits of using Skype as a video conferencing tool that has enabled them stay in touch with workplace learners and as an alternative format for monthly team meetings. Benefitting from their online learning in Mactrac modules 1 & 2, some tutors went on to combine Skype with the use of online whiteboards and graphics tablets to create a dynamic and effective online teaching experience.

After the project mentors Bob Read and Elaine Szyptma had met their practitioners face to face, they maintained regular contact with them via Skype all the way through the programme, exploring features such as file sharing, group video calls, use of online whiteboards. The project team held three webinars during the project which facilitated the sharing of ideas and good practice between the face to face workshops. These webinars served to consolidate and further extend the skills and confidence of partners in using a video conferencing package.

Karen Hampshire, a Director at KEITS, has already begun to use video conferencing for regular monthly meetings with her managers and has also supported her assessor teams in their use of Skype as a basis for standardisation meetings and online tutorials with workplace based learners. She has also made plans to introduce a new delivery model for apprenticeships that is underpinned by a much greater use of digital technology. As one of her practitioners put it, succinctly, 'The financial and time benefits of this are enormous.'

The need to improve cost effective delivery

Given the constraints on funding within the FE and Skills, most managers were challenged to make efficiency savings, sometime up to 40% and so were hopeful that the chance to explore the use of digital technology and blended learning models in the project might provide insights and resources that then could then be shared with colleagues as a way to making some of the necessary cost reductions within their provision.

Solution: All of our practitioners have learned to use a range of e learning tools such as Padlet, Lino it, screencasting and free VLE platforms like Edmodo to create and share blended learning material. As a result they feel much more confident to expand that element of their teaching.

As part of their project, Lisette Veit, a curriculum manager at Cambridgeshire Adult Learning & Skills, cascaded training in video conferencing software alongside other multi-media tools for communication and collaboration with the service's middle managers aiming to raise awareness of the potential benefits of using digital technology for 'SMARTer Collaboration' and working practices. She has also identified ways in which the service can respond to budget cuts by using blended learning models more extensively to offer staff development programmes as well as community-based courses for adult learners.

The need to meet the FELTAG challenge

Given the FELTAG challenge of increasing the online element of teaching and learning all providers were keen to explore 'quick wins' in the use of digital technology that could then be shared more widely within their organisation to encourage other staff who develop their skills and knowledge in this area.

Solution: From early on the project it was common for our practitioners to be used as 'digital champions' in their organisations, demonstrating the e learning tools they were using on the project in workshop sessions for colleagues and also generally sharing their newly acquired confidence and enjoyment of using digital technology.

Maria Neary, Business Improvement Manager at Essex ACL, used the project findings to inform their new Digital Technologies strategy for the service which is being implemented from September and involves the purchase of new touch screen monitors and tablets, the wider use of BYOD and upgraded wifi access. Her colleague, Jo Loss, Curriculum Co-ordinator for Foundation Learning, used the project to pilot a new e ILP and plans to introduce it more widely within their provision during the autumn term. They both plan to share the findings from the project in staff development conferences this autumn using their two practitioners as workshop facilitators. One of their practitioners has also recently delivered a staff development session for a local FE provider.

Mactrac module 3 was also developed to increase the awareness of leaders, managers and governors of the potential impact of learning technologies, the Feltag recommendations and their importance for strategic planning and decision making.

Impact identified

Impact on partner practitioners, their organisations and their learners

Engagement	Leaders & Governors	Practitioners/ Assessors	Technical teams	Learners	Employers
Target	12	70	7	96	18
Actual	**45**	**209**	**7**	**656**	**13**

The project initially involved 13 practitioners from provider partners in action research activities, CPD workshops, webinars and the Mactrac modules. 11 of these practitioners demonstrated significantly improved knowledge, skills and confidence and have adopted new working practices and delivery methods as a result of their participation in the project.

They cascaded learning both formally and informally to colleagues within their organisations. By project completion in September 2015, our partners reported that 187 other practitioners/assessors were actively engaged in the project. The remainder of practitioner numbers consist of the ACER development adviser team and others from external providers who accessed Mactrac modules 1 & 2.

Comparison of self-assessment results by practitioner

V1 = Initial Self Assessment
V2 = Final Self Assessment
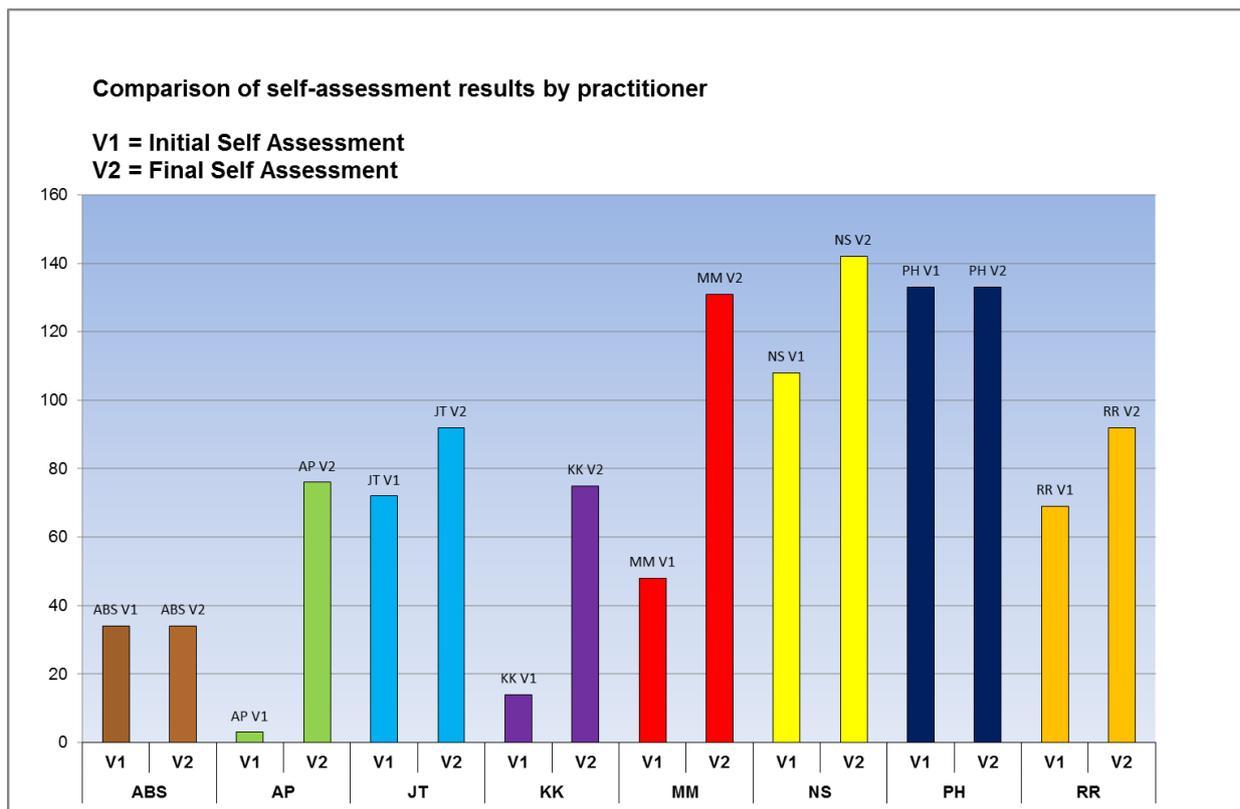
Practitioners' skills levels at the beginning and end of the project

At the start of the project, ACER's training and development advisers developed an initially paper-based, and subsequently interactive, self assessment tool to provide a base line indicator of the range of technologies that our partner practitioners and managers had familiarity with and knowledge of and their skills and confidence in using them. They then had the opportunity to re-assess their skills and confidence levels at the end of the project.

8 of the 12 staff, who completed the initial self assessment, reassessed their skills and confidence levels. The average improvement in skills was 18%. 2 of those who reassessed, one of whom was an ILT manager and the other a practitioner, indicated no improvement in their skills or level of confidence. However, the remaining 6 indicated an average improvement of 24%.

Practitioners' confidence levels at the beginning and end of the project

The majority of staff who reassessed indicated that they had very low, 'zero', confidence levels initially. Of the 6 who indicated improved levels of confidence, their average improvement was 10%. Chart 2 below provides a visual representation of their significant improvement in confidence levels but also includes the ILT manager referred to above who did not indicate any improvement.

Comparison of Confidence Levels by Practitioner

V1 = Initial self-assessment
V2 - Final self-assessment
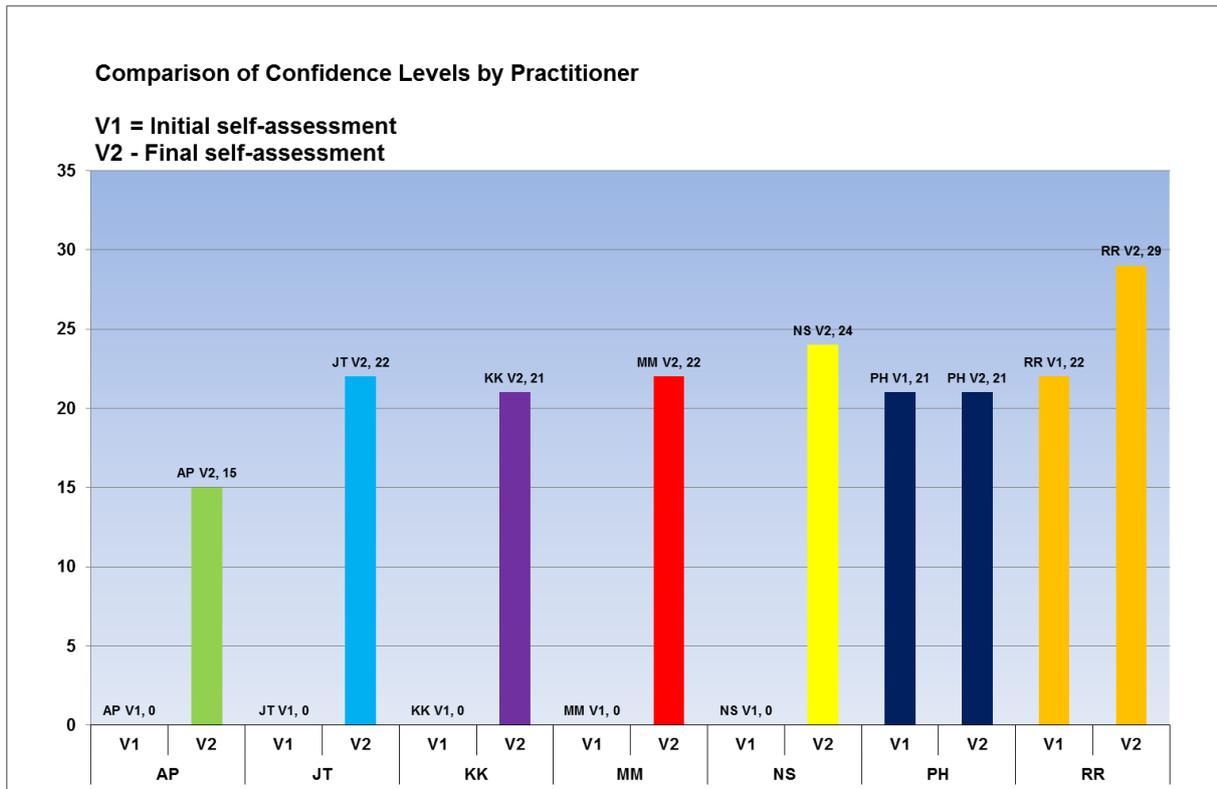
Bedford College

Bedford's team consisted of 3 practitioners (including an Assistant Director), a project manager and a dedicated technical team. At project completion, the project manager reported that 15 practitioners/assessors were actively involved in the project. Referring to the immediate project team, she commented that:

'All staff in the project confirmed that they are now much more aware of the number of tools, particularly free tools, which are available for many different purposes. Tools which we have found particularly useful in T, L&A are youtube, skype, padlet boards, mystudy bar, social media, text prediction, coloured overlays screencast-o-matic and x-mind.'

The main output was a moodle course aimed at apprentices for Functional Skills Maths & English at Level 2 which was produced through the collaborative and active involvement of all team members and will continue to be developed post project. Austyn Beeching-Smith who trialled the maths moodle course with a group of motor vehicle apprentices reported that they enjoyed the learning and found it easy to use. The diagnostics and resources worked well and they enjoyed being able to access the resources whilst not in college.

Nina Sharp conducted a learner survey which indicated that they would like to use digital technology more regularly even in 1:1 sessions. She used resources from Learning

Futures webinar and an ACER workshop to train her learning support staff on assistive technologies at a staff conference and at new staff induction. She plans to continue to this training by introducing technologies on a regular basis and allowing staff time with the expectation that they will use them. Increased use of assistive technologies is perceived as increasing learner independence and improving access to the curriculum.

Both the project manager and an assessor involved in the project are now using Skype to communicate and feedback to apprentices and learners, saving significant travel time, and there are plans to use screencasting for tutorials.

A dedicated member of staff was allocated from the learning technologies team to be responsible for building and maintaining the Moodle site and increasing the interactivity of resources. Two members of the team were actively involved in the project. Tim Trodd accessed a range of Learning Futures' webinars and resources before moving into employment with a local University. His replacement Nadine Neita has confirmed that she is now far more aware of the range of technologies available, is more confident about sharing her knowledge and training and advising staff and will continue to be responsible for the Moodle site in the future.

6 senior leaders at the college have signed up for Mactrac module 3 and a governor, Jenny Hunt, was responsible for its development and produced a case study evaluating its content.

Further qualitative commentary from Bedford's manager and practitioners can be found in their [case study](#)

Essex County Council Adult & Community Learning

Essex's team consisted of 2 practitioners, a project manager and a senior manager with responsibility for digital technologies. By project completion, they reported that a further 77 practitioners were actively involved in the project through staff development and other digital technology strategic developments. They estimated that at least 500 learners were now using e ILPs and had viewed screencasts on their use.

The practitioner team from Essex ACL provide striking examples of increased knowledge, skills and confidence:

'I am now confidently using a range of learning technologies that I was not using prior to this project: Screen-cast-O-matic, Padlet, Socrative and Lino-it. I have also created a YouTube account, which has proved invaluable for storing video files and sending them to learners. I am also aware of a wider range of learning technologies that I intend to use in the future, such as X-mind. I have also started to use Skype to communicate with learners, which is proving useful, particularly when sharing my screen to display work.' (Sam Butler – Essex ACL)

'The project has given me the confidence to use new technologies and make the most of ECC technologies. I have delivered remote one to one lessons via the ECC

Lync system using the instant messaging, the on-line whiteboard and screen-share facility. I am using screencast regularly to give feedback to learners. I also use screencasting as a teaching tool to differentiate in lessons or to send a recorded lesson to a learner who has missed a session. I have had a very positive response from learners to the screencasts. For them and me, it's like having two teachers in the room!' (Ann Siveyer, Essex ACL)

Sam Butler comments that the project has 'greatly improved her practice' as it has allowed differentiation needs to be met in the classroom, as well as providing valuable resources that learners can access at home or in the workplace. For her 'using learning technologies have inspired me to continue to develop professionally, particularly in the area of creating resources and giving feedback to learners.'

On the learning experience and their learners' knowledge and skills development, Ann comments that she has received positive feedback about screencasts and remote support and is receiving more contact from learners between sessions. Apprentices have taken new technology in their stride. She anticipates flipping their learning through screencasts. Further qualitative commentary can be found in their case study

For their senior manager, Maria Neary, leaders and managers have 'have seen the impact of effective use of technologies on learners' retention and the measurable increase in tutor/assessor confidence in using new digital skills.' A new digital technologies strategy has been developed which incorporates the use of online resources for teaching, learning and assessment. They have already begun a staff development offer for tutors and assessors across the organisation which includes sessions delivered by the project practitioners and will be undertaking a digital skills review of all staff to ensure that staff to ensure they have the skills required to embed the use of technology in their teaching and learning to support and motivate learners.

KEITS Training Service Ltd

Keits' team consisted of 2 practitioners and their senior manager, Karen Hampshire, who is a Director. For her:

'The staff directly involved in the project have benefitted enormously, even though they both started from very different points in terms of expertise, understanding and confidence. One was already very confident and liked to explore and experiment, the other was a nervous technophobe.'

The latter, Kate Knight, provides a striking example of a practitioner who made enormous progress in her use of learning technology. She is now able to use a wide range of digital skills to create multimedia resources and to use video conferencing packages when communicating with learners or with her colleagues. Commentary on her journey can be found in the Keits' case study.

From early on in the project, Keits' practitioners disseminated what they had learned to the rest of the assessor team, including examples of work they had actually done with learners. By project completion, their manager reported that a further 18 assessors/IQAs were actively involved in the project through internal dissemination and or engagement with the Mactrac modules.

'The impact on the rest of the team was interesting to observe, because it was coming from their colleagues and they could see the technology in use in real situations, they were much more open minded about trying new technologies and became quite excited about the potential for helping them to improve the learner journey and managing their own workload.'

Skype has had the most immediate impact with Padlet, Screencasting and Pamela to be incorporated in to their revised delivery model going forward. Although in its early stages, those staff who have started to implement technologies in their teaching are finding it 'quite inspiring', have had positive reactions from learners and are keen to develop it further. Use of learning technologies have helped to reduce the time on the road for some assessors, which in itself has improved job satisfaction.

A number of Horticultural learners have reported that the use of Skype by their assessor has improved his availability to them between his visits and so their engagement, understanding and enjoyment and as result they are progressing quicker than they were before. They anticipate that as more assessors embrace the options available and more teaching and learning resources are produced using these technologies, that their learner journeys, which are very individualised, will be further enhanced. Their learners, who work in land based industries, often in remote areas, are beginning to understand how they can improve communication, save time and continue to learn using mobile devices.

Keits also found the opportunity to work with practitioners from other organisations invaluable, particularly in recognising common concerns, barriers and challenges. Their Directorate and senior management team of 6 supported the project and its dissemination to other departments within the organisation.

Agreements have been reached about investment in technologies and further research is taking place to identify other technologies that could improve outcomes for learners. A working group has started a review of the organisation's delivery model to ensure that the tools and lessons of the project are used to create a positive impact on the learner journey and outcomes. Development and use of learning technologies is now embedded within their QIP. Policies and procedures around e-learning, e-safety, etc have been revised and augmented.

Cambridge Regional College

Their team consisted of 2 practitioners and a senior manager. Both their practitioners indicated through the project's self assessment process and their reflections that they made significant progress in terms of their skills and confidence. Both shared their growing

skills and expertise with 8 assessor colleagues, they have linked with the college's excellence coaches and a further workshop is planned for assessors interested in the use of video conferencing for online learning.

Mick Martin, for example, embraced a range of digital tools to provide a truly collaborative online experience for his learners. He began by using Skype, then learned how to use the online whiteboard Scribblar and finally added a graphics tablet which enabled him to share live maths operations with his learners. He was supported in his skills development through the learning he acquired by quickly progressing through Mactrac modules 1 & 2. He developed his skills in a gradual and systematic way, an approach which he shared with his peers in one of the project's collaborative workshops and by giving access to online tutorials with a learner to project practitioners from other organisations.

His reflections on the benefits of online support including modelling the use of communication technologies to prepare for job roles in increasingly digital workplaces and the plans he has made to extend his repertoire and incorporate much more digital technology into Functional Maths workshops for learners on Traineeship programmes can be found in the [college's case study.](#)

Anita Parberry piloted the use of screencasting to record feedback on sample Functional Skills papers and found this to be a quicker and more effective method than trying to describe and correct errors via email. She has recently begun to use screencasting with Functional English learners.

For their manager, digital engagement away from the workplace enables a more personalised approach to the development of skills, increases the development of learners' digital fluency and improves the focus and increases value that learners and assessors place on face to face time. By having assessors modelling the use of digital devices in learning contexts learners develop their understanding of the potential of these media beyond the personal and social media contexts. 'Learners experience of their qualification is now of a blend between occupational excellence and digital enrichment.'

The project supported the college's journey to develop e learning as an integral part of every learners' experience. It recognises that access and engagement can be more challenging for learners in the workplace who may not have access to a smart device, have no Wi-Fi access, or mobile signal during their working hours. The college aims to address such issues through its new e learning strategy.

Harlow College

The college team consisted of 2 practitioners, a manager and a dedicated member of their technical team. Both practitioners made significant progress in their skills development. By project completion, they had shared their learning with at least 6 other colleagues and 98 learners were estimated to have benefitted from their new skills and confidence.

Abel Omiyale developed Padlet boards to support the delivery of Functional Maths. He was keen to reduce his use of paper based materials and develop more interactive,

engaging and accessible blended learning materials. He developed links to customised and personalised Padlets for learners to access individual objectives and learning outcomes for sessions. This has enabled more confident learners to work independently and frees up time for him to support the less confident and enables those who are unable to attend to access remotely. Exposed to a range of e learning tools through the project, he has radically changed his teaching practice. He now has a complete toolkit of multi-media resources which include QR codes for quick links to videos and online resources.

Jo Thompson developed her own skills and confidence by setting up a Wiki site with an IT Users apprenticeship group. She then further explored Wiki site development with a group of Business Admin apprentices as a way of embedding support with Functional English, by asking them to check and proofread their own and each other's work and share comments on appropriateness and technical accuracy. She learned how to use Socrative to create mock tests and has shared this tool, much enjoyed by learners, with the college's apprenticeship team who now use it regularly.

Although she initially had good IT skills, she developed her knowledge of a range of tools and resources through the collaborative project workshops which 'have been inspirational – I have gained a lot of ideas from the group sessions.' She has more recently developed a series of Xerte learning objects as part of a flipped learning approach allowing learners to prepare for sessions in advance and for revision.

Both practitioners are now much more confident in participating and sharing ideas in the college's e learning training workshops in a context of an objective for all teaching staff to ensure 10% of their programme is delivered via online learning. The college's Chair of Governors observed Jo and Abel's research activities. Their manager confirms that 'e learning is a considerable part of the organisation' and that they have 'been keen to share effective practice'. Further information can be found in the college's case study.

Cambridgeshire Adult Learning & Skills

At the start of the project, this provider identified 2 practitioners, a manager, their Head of Service as well as other key staff to be involved in the project. Their original aim was to engage workplace learners in valuing functional skills support as an integral part of their apprenticeship programme through identifying appropriate web based materials and exploring the use of video conferencing to increase levels of contact between assessor and candidates in a cost effective way. They were also keen to introduce assessors and functional skills staff to the benefits of using Edmodo as a VLE and further developing their skills and confidence in the use of digital technology.

Their original focus was Health & Social Care apprenticeships but changes in contractual arrangements, long term staff sickness and an organisational restructure meant that this was no longer feasible. They decided instead to focus on staff development activities and integrating digital technologies into workplace practices.

They continued the development of an Edmodo site as a blended learning platform for the delivery of an in house Level 3 Award in Teaching Mathematics with 18 staff successfully completing, all of whom reported improved ICT skills as a wider outcome. The digital content and flipped learning approach of the course were enhanced by new skills developed through involvement in the project. Their project manager, Lisette Veit, also set up an Edmodo site as a professional networking tool and discussion forum for English and maths teachers in Cambridgeshire and attributes increased membership to their involvement in the project and the wide range of new digital tools that they have been able to share as a result.

As part of their strategy to raise awareness of the potential benefits of using digital technology, Lisette delivered a workshop with an ACER development adviser for the service's middle managers, introducing and modelling a variety of tools that both they and their tutors could use.

They also planned and ran a standardisation meeting using a range of digital tools which they then shared with colleagues as a Blendspace module, serving as a practical example of how digital technology can be used to improve working practices.

After completing Mactrac module 1, the team were keen to share their knowledge and skills with local employers and set up workshop for the South Cambridgeshire Advice Network. They also explored the viability of offering contextualised e learning English and maths resources on workplace support programmes consulting with a range of care employers about their key priorities and piloting some early draft resources.

Senior managers, including the Head of Service, have been actively involved in the project throughout. They have accessed useful and thought provoking CPD through the Mactrac modules. For Lisette Veit, involvement with the project has led to key changes within the organisation. Internal professional development has led to a strand in their quality improvement strategy focusing on innovation, with digital technology as a major component of the theme.

The project has not only provided a range of practical examples of how digital technology can be used in English and maths teaching, but also in improving collaborative and efficient working in their service:

'Quality Improvement policies have been influenced by the Learning Futures project, and aspects of digital technology have been used to help the transition from a service with multiple, separate strands of work to an integrated service arranged by geographic area.'

 Further information can be found in their [case study](#).

Key learning points
Key factors in the success of this project have been:

- Strong initial planning to identify the sequencing, dates and timings of project workshops and webinars to ensure that project practitioners were able to diarise participation and arrange cover if required;

- An initial, clear specification of project requirements including role descriptions for various members of providers' multi-level teams
- A small but dedicated team of enthusiastic, specialist development advisers willing and able share their knowledge of useful e learning tools and persistently communicate with, support, coach and mentor their provider case load;
- Our project partners' choice of appropriate practitioners who were suitably motivated and capable of benefitting from their involvement in the project and above all who were willing to share their research activities, ideas and progress with colleagues within their own organisation and from other partner providers;
- The development of active collaboration between practitioners, who often work in isolation, from different partners through openly sharing their activities, progress, barriers and solutions in workshops and webinars and inviting peers from other partners to participate in their 121 sessions with learners. Our initial communication and regular reinforcement of the collaborative ethos of the project and their positive engagement enabled this.
- Our partnership with MacTrac and the new ideas, inspiration and expertise that they have shared in developing the modules in live online learning and finding alternative solutions for partners where barriers to the use of specific packages exist. Close collaboration and planning through video conferencing and regular email exchanges about the project and the progress of practitioner activities enabled this.

What should be avoided

- Break down in communications and monitoring. Regrettably, our attempt to widen participation in Mactrac module 3 was thwarted by a technical issue in relation to potential participants be re-directed to an earlier module. This was not identified until a very late stage in the project. Furthermore, at times, development advisers found it difficult to get responses from both practitioners and their managers. Ways need to found to ensure that project partners make space and time to respond to communications.
- Over complex processes for managing recruitment to online learning modules. There were too many steps involved in the journey of potential participants from initial expression of interest to eventually starting the Mactrac modules. This undoubtedly reduced the number of people who subsequently actively participated in the learning.

Sustainability and next steps

Individual and organisational plans for building on their learning in the project are detailed in the next steps sections of each partner provider case study on the project's wordpress site.

KEITS, for example, comment on their intention to adapt their apprenticeship delivery model in the light of changes to funding levels, Ofsted inspection requirements and the changes to apprenticeship frameworks following the Trailblazer pilots. They anticipate that assessors will have more of a direct training role with less time spent on assessment activities. They are keen that assessors have as much time as possible during their

workplace visits to offer support with practical skills and can begin to use blended learning materials more and more to develop underpinning knowledge both in the vocational subject as well as in English and maths.

Bedford College intend to continue to expand the use of their Functional Skills Moodle, expand the use of assistive technologies and a new Functional Skills e learning package developed by an Awarding Body.

Sam Butler, Essex ACL, plans to use digital technology to improve the delivery of three key aspects of course administration, classroom interaction and distance learning opportunities.

Several of our partners have planned further internal dissemination workshops and activities and the final project dissemination webinar will take place later in the Autumn after further promotion through ACER networks. We plan to involve our project partners in disseminating the lessons that they have learned as managers and practitioners through their action research activities and the outcomes and impact on their organisations. We aim to sustain the project's achievements by maintain and regularly updating the project's wordpress site and convening regular webinars focused on the use of specific e learning tools for our project partners and by widening participation to others who express interest in joining the digital teaching and learning community.

The project's three Mactrac modules have been reviewed and revised and we are proud to report will continue to be available to FE & Skills providers as open access courses on Versal.com, an interactive publishing platform for teachers and learners around the world. We feel that access to these modules will provide valuable learning opportunities for staff at all levels in FE and Skills.

Resources

1. Wordpress Website

The project team have created a multimedia website ['Digital Approaches to English and Maths: using digital technology to support learners on Traineeships and Apprenticeships'](#) which gives access to all of the project's documentary and multimedia resources.

(a) Case studies

The website contains six case studies, [1-3 of FE College partners](#) and [4-6 of Adult & Community Learning and Independent Training providers](#), which summarise the progress of each provider through key stages of their action research activities during the project. Each case study has four sections (The challenge; Some solutions; Reflections and Next steps) and contains numerous audio clips from interviews with the staff and learners involved. Each audio clip is accompanied by a verbatim transcript which can be opened via a weblink adjacent to the sound file. The case studies also feature examples of the

digital resources created by practitioners and include links to exemplar online sticky boards, quizzes, screencasts, mind maps, etc.

(b) Useful tools

This section presents a directory to the [sixteen most popular e learning tools](#) that practitioners used to create their own resources for English and maths teaching. We have grouped them under the four headings that describe the most common ways in which practitioners used the tools: classroom interaction, content creation, remote support and learning support. For each e learning tool there is information about:

- its name and weblink;
- its purpose and general features;
- how it was used by practitioners;
- links to exemplar resources;
- clips from audio interviews with practitioners who can recommend the tool;
- screencast videos to introduce the key features of the tools;
- links to alternative tools that can be used for a similar purpose.

The 'Useful Tools' section also contains links to the web-based resource banks that practitioners found useful during the project.

(c) CPD Live Online

This section contains information about the [two Mactrac modules](#) that were developed and piloted with practitioners to introduce video conferencing as a tool to offer remote support to their learners.

Mactrac module 1 focuses on the skills assessors and tutors need to offer 1:1 online tutorials. It aims to guide participants through the basics of setting up a video conferencing package like Skype and to introduce some of the key functionalities and the pedagogical opportunities presented by online learning.

Mactrac module 2 explores the additional skills needed to work with groups in an online tutorial setting and looks at a wider range of video conferencing options. It consists of three chapters and whilst the first module focuses mainly on the use of Skype, the second module covers the key features of Google Hangouts and WizIQ.

There are live links to each module so that visitors to the site can work through each programme as an open access course hosted on Versal. Pdf versions of each module have been created and presented as project resources (see below) but are not available for download from the website.

(d) Leadership and Governance

This section presents information about [Mactrac module 3](#) which was developed to support leaders, managers and governors in understanding the impact of digital technology on teaching and learning. It also contains links to case studies that summarise

the way senior managers from various project partners are planning to promote the use of digital technology within their organisations.

There is a live link to Mactrac module 3 that visitors to the site can use to access a revised version of the course which is hosted as an open course on Versal. A pdf version of the module has been created and presented as a project resource (see below) but it is not available for download from the website.

(e) Workshops and webinars

This section of the website contains the resources from the [three full day workshops](#) that practitioners attended during the project. For each workshop there is information about:

- the aims and objectives;
- the content covered;
- the slides used by presenters;
- exemplar digital resources or hard copy resources used in the workshops;
- feedback from participants.

To facilitate the sharing of ideas and resources between the three workshop days practitioners also attended an hour long webinar every other month and recordings of these webinars are available in this section together with the slide presentations used. There is also an electronic version of a self assessment tool which was used to at the start and end of the project as a measure of improvements in skills and confidence.