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Case study

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PUTTING LEARNING FIRST

Cambridge Regional College
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Association of Colleges in Eastern Region (ACER)

Digital Approaches to English and Maths

- using technology to support learners on traineeships and apprenticeships

- Cambridge Regional College

PROJECT LEAD

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Commissioned and funded by
The Education & Training Foundation

1. About the Provider

Cambridge Regional College is one of the largest FE colleges in the Eastern Region. In delivering apprenticeships it works with over 800 employers.

It operates from two main campuses within the city boundaries: King's Hedges, which caters for over three quarters of learners and the Cambridge city campus. The college has 4,000 full-time and 6,000 part-time students and 5,000 apprentices currently in training. In delivering apprenticeships it works with over 800 employers.

2. The Challenge

About the practitioners

Anita Parbery works as an assessor on a range of courses including Team Leadership & Management and Level 4 Business Admin apprenticeships and every six weeks offers one day support sessions in Functional Skills to prepare candidates for their exams in Maths & ICT at either L1 or L2.

Mick Martin also works as an Assessor on a Food Industry and Warehousing Apprenticeship. Mick has a weekly Wednesday morning Functional Maths session over a six week period and also offers Functional Skills support to his candidates on a 1:1 basis.

Supporting apprentices and trainees

At the start of the project Both Mick and Anita were aware 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 for blended learning.

Given the distances that Mick and Anita 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 regular tutorial contact with their learners. They were also wanted to learn how to use digital technology to make their group teaching sessions more engaging and effective.

3. Some Solutions

Padlet

In the first Learning Futures workshop participants had an opportunity to see how online sticky boards like **Padlet** and **Lino it** could be used to create blended learning resources and to enable learners in the classroom to share ideas during discussion and webquest activities. Mick and Anita were keen to explore both of these options.

On a previous project when he was working with learners on a Traineeship programme Mick had already explored Padlet as a tool for collaborative working and he has continued to use it in this way with his learners on the Learning Futures programme, often sharing his ideas with other practitioners in our workshop sessions and webinars. In one workshop session, Mick demonstrated how he uses Padlet as a way to develop learners confidence in

their reading skills using workplace documents. He explained how, as part of a session on Employment Rights and Responsibilities, he might ask learners to go off and find different types of Contracts of Employment on the internet and then use Padlet to post examples of the key headings and information that the contracts regularly contain. Mick finds that this kind of collaborative task works well in engaging learners in a practical reading activity and enables him to embed an element of English support into one of the core sessions of his apprenticeship programme –

'So what I did was, I made my Padlet board and I got the students to go away and do some research and then come back and then use the Padlet board for each to post what they had found out. We talked about employment rights and responsibilities so they went away and found out about contracts, statutory rights, working rights directive, everything and they all came back and we made a Padlet board. The thing I found out about the Padlet board is that when you are sitting in the classroom with people and you're asking questions and they often don't like to say anything. But if you put a Padlet board in front of them or give them the access to a Padlet board, they write away as they are more confident in doing it like that rather than speaking which is fine. The great thing about it as well is it's kept. So once it's there, it's kept so they can take it away with them or access it any time they like. I also use it for maths workshops. I used it to create a 'formula board'. I put a lot of maths formulae on there and went through them with students. I gave them access to the Padlet board and as they've got smart phones, they can use it even when they are out shopping and want to know about percentages – they just get their phone out and it's there – it's a fantastic tool."

Anita has also used Padlet to gather together web-based resources around key topics in English and maths that she knows regularly cause difficulties for her apprenticeship learners. She may originally develop the Padlet board for use with one particular learner but she creates the resource with the expectation that it will be of value for other learners too. She tries to include a video tutorial as well as multiple choice quiz so that the Padlet board could be used by learners working independently to develop their skills and check their learning progress. In this way Anita has begun to build up a bank of support material that she can share with other colleagues too. She describes how she used Padlet with one of her learners -

'Well, I had a particular learner who couldn't get their head around percentages. He could tell me what an answer was to a question but had no idea how to work it out using maths. So, I spent a little bit of time one to one with him in our meeting and what I tried to do was to develop a resource that I could share with him that would give him a few things to look at with some different activities. So I put on there a little explanation as to what percentages were. I found a Youtube clip where somebody was explaining how to work percentages out. I also developed a little quiz using Goconqr software that I put on there. That's a multiple choice quiz and then I shared that with the learner – I actually sat and showed it to him when I visited the time before last which is when I identified that my quiz wasn't quite working. I shared it again with him but I did it primarily so that I could show him while I was there because he's not very IT literate so I wanted to get him familiar with how it works and how he could actually look at it and click on the various bits to get them working. I talked him through it and then I've left it with him so he could have a play."

Use of Skype

Like all the other apprenticeship providers in the project Mick and Anita were keen to explore the use of Skype and video conferencing as a way to offer 1:1 tutorial support with English and maths. The use of video conferencing as a way to stay in touch with apprenticeship learners has numerous immediate benefits for assessors who have to travel extensively to visit their candidates in the workplace. As these visits are expensive in terms of time and travel costs, assessors have to limit the number of those visits and so the option of offering 1:1 support would enable assessors and candidates to have more regular contact.

Mick was really keen to explore this option with one of his candidates, Shane, and during the project had almost weekly tutorial sessions with him. Mick soon realised that by simply using the screensharing features of Skype they were able to work through some Functional Maths papers together and they both quickly became confident in using Skype for this purpose. However, as Mick worked through the two Mactrac modules on video conferencing, he became aware of other tools that he could use to enrich the online tutorial experience for his learners. As the project progressed he therefore began to use an online whiteboard (**Scribblar**) in conjunction with Skype so that both he and the learner could work collaboratively on calculations. Mick then progressed to using a graphics tablet which enabled him to write up maths calculations more quickly and easily on the whiteboard. In addition to maths support, Mick also used his Skype tutorials as a context in which he could engage learners in 'professional discussion' which Mick was able to record as audio files using MP3 Skype recorder and use as evidence for candidates' portfolios.

Screencasting

Whilst Mick was exploring the use of Skype to offer online support to his candidates, Anita was keen to pilot the use of screencasting as a way to record feedback on the sample Functional Skills papers that her candidates were completing to prepare for their exams. Anita has found this form of feedback to be quicker and more effective than trying to describe and correct errors via e mail contact with her candidates. For example when commenting on completed sample Functional Skills ICT papers she was able to not only highlight any mistakes but demonstrate to the learner the correct procedures that they should have followed. To use screencasting in this way Anita has also had to learn how set up and use a Youtube account so that the videos could be shared confidentially with learners -

'With screencasting, what it's done, it has enabled me to record my feedback to the learners and where they've not got it right to actually demonstrate to them and show them what they should have done in order to score those points. So, I've then been able to obviously share that screencast with them which I was able to do through the Youtube links so they could actually go in, watch it, listen to it and learn from it and obviously help them to develop the right skills. Prior to using screencasting all I was ever doing was to send them an e mail that was basically a write up and obviously depending on how you word it, it could be quite difficult for them to interpret that and then to actually practise. But by using screencasts they can watch me, talking them through it and they can actually see what I'm doing at the same time and for me it's a lot easier to learn that way rather than just trying to read an e mail message.'

4. Reflections

Impact on tutors

In reflecting on his progress in using digital technology on the project Mick says that he has really enjoyed the opportunity to learn how to combine a range of digital tools to provide a truly collaborative online learning experience for his learners –

'I began by just using Skype to work with learners and then slowly learned how to use other tools such as Scribblar – it made a lot of difference to my online maths teaching when I began to use the graphics tablet as I could write up things like fractions and cancel them down much more easily…'

Mick was asked to share his experience of offering online support in one of our workshop sessions and he encouraged tutors to build their skills slowly, becoming confident in using one tool before moving on to others.

'First of all, it was just the basic use of Skype video conferencing. Talking was great, share screen, send files, get them to share their screen with me and explain to me how they can do it. Eventually we mastered it and then I introduced Scribblar, the online whiteboard and combining that with Skype was great because I could have a whiteboard there as if I was in the classroom working on it with the learner, video conferencing at the same time. So you can see your student and listen to each other. Then we decided to introduce the graphics tablet. When you use the white board some of the working out, especially fractions, took a bit of time so using the keyboard was time consuming. Introducing the graphics tablet, well, it is like writing on paper.

You're writing on the tablet and it's on the screen so showing your workings out, doing fractions, it was all much clearer. It was quicker, less time consuming. More importantly you could understand it better. If you are drawing or writing anything on the whiteboard you need your student and yourself to understand it. So we had Skype, Scribblar and the graphics tablet running, then because of the Scribblar programme I was using, I wasn't able to save the work really. So I introduced 'Snap my Screen. It is a simple screen capture tool so whatever is on your screen. So, if I was doing some working out with a student and he's done some work I could save that and it could go off into his file. Then I introduced MP3 Skype Recorder so we could record professional discussions with my learner.'

Impact on learners

Mick feels that online support offers all sorts of benefits for learners. Firstly, he finds that if learners opt to have their Skype tutorials from home, they can often be much more relaxed than they are during workplace visits when they can feel the pressures of their work commitments. Secondly, for a learner like Shane it also meant that he had much more frequent support sessions and was able to enjoy not only regular feedback and support with his maths skills but also with his apprenticeship in general. For example, Mick would often use the Skype sessions as an opportunity for a professional discussion that he would record and then use as evidence in his portfolio. Thirdly, through using more digital technology in his teaching whether in the classroom or in offering remote support, Mick is aware that he is modelling to learners a range of important communication technologies that will serve to prepare them for job roles in an increasingly digital workplace.

Shane went on to pass his Level 2 Functional Maths exam in August 2015 and says that one of the reasons for his success was the regularity of his online sessions and the personal contact he had with Mick. Shane lives in a remote rural location and reflects on the benefits of online support in terms of the travel time he saves and the easy access he had to Mick's personal support. When asked about his experience of online support Shane commented -

'Scribblar is pretty easy to use. If I'm honest, it's brilliant. It's so much easier to use. Living out where I am at the moment it's practically out in the sticks. It's about as far as I'm willing to go from anywhere. It makes life so much easier because generally if I wanted to travel out and see people it generally takes me about an hour and a half because I've only got a pushbike. If I was in a car, it would take me about half an hour. If I was going to the college where Mick is, which is Cambridge College, then it would probably take me longer.'

Impact on the organisation

Laurence Wells who managed Mick and Anita during their participation in the Learning Futures project fully endorsed all the key benefits for learners that they have noted in earlier sections of this case study. For example, in reflecting on the impact of the project he commented –

"By reducing travel to visit learners in the workplace there has been a greater emphasis on the development of each learner's digital fluency alongside their occupational qualification. The dynamic of assessors also engaging with learners digitally away from their workplace has enabled a more personalised approach to the development of all skills. The time that assessors spend face-to-face is more focussed and valued by both assessor and learner."

”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.”

Anita and Mick have taken every opportunity to share their growing skills and expertise in using digital technology with their fellow assessors at regular team meetings and Mick has been asked to run a workshop in the autumn term for other assessors who are keen to learn about the use of video conferencing for online support. Ann reflects on the way she met with her colleagues in a team meeting -

'I actually demonstrated Skype and how to use Skype. So I got one of my colleagues to set it up on her laptop so we had both laptops going in the room so we could actually show how to have a call, how to share the screen and to give them some idea of what they can do. I think probably one of my colleagues had used Skype previously for personal reasons but none of them had ever thought about using it for work and what they're doing with the learners, so we did that. I also talked to them about screencasting and I shared the learning futures CPD activities with them and had a look at that and we've actually got a team meeting coming up on Tuesday where if I get the opportunity, I was going to show them the little Padlet board that I put together on the percentages just to show them the sort of things you can put in there and how easy it is to physically create it so to speak. Just to give them a few ideas and if they want to do something with learners they can.'

And finally Laurence emphasises that the college is keen to validate and share the insights that Mick and Anita have gained so that they shape the college's wider policies and activities in promoting the use of digital technology not just in workplace delivery but throughout the curriculum. He is aware that the full impact will not be recognised until the end of the next academic year –

"Our two researchers have engaged with their workplace learning colleagues and a range of college-wide Excellence Coaches to share their experience and to develop new approaches to learning and delivery methodologies. The work of this project has run alongside the whole college approach to the development of eLearning, and the potential for a roll-out with clearly targeted impacts will not be realised until 2015/16 after collation and reflection of the full range of activities undertaken in 2014/15."

5. Next Steps

Now that the Learning Futures project is coming to a close, Mick is looking ahead and planning how he can use much more digital technology in the Functional Maths workshop sessions he will offer students on Traineeship programmes from September 2015.

Mick developed a flowchart with his mentor, Bob Read, to summarise the different tools that he plans to use to support his students both in the classroom and in blended learning. It is not intended to describe any particular session but aims to summarise how different types of digital technology can be used at various stages of a session to engage and support students. It is a format he might use when talking about his use of technology to his colleagues.

It looks at ways of using digital technology to:

- engage learners in starter activities;
- facilitate the sharing of ideas in group tasks;
- organise ideas on the interactive whiteboard;
- promote independent learning;
- design 'exit tickets' for formative assessment;
- create resources for blended learning.

Starter activities

Through the project Mick has noted how tutors from other providers have been exploring different starter activities using the interactive whiteboard. One of the tools Mick has piloted has been a version of the **Countdown** game from the popular TV programme. It gives learners some brisk practice in using their mental maths skills. You can restrict the target number and extend the time limit in each game so that it can be used with learners of all abilities.

Small Group tasks

Mick plans to make regular use of Padlet, an online sticky board that can be used flexibly both in the classroom and in creating material for blended learning. He plans to use Padlet to enable learners working in pairs or small groups to post their ideas or calculation strategies so that they can share them with the rest of the class in the review activity that he leads using the interactive whiteboard. This means that all students have the opportunity to share their ideas with the rest of the group, even those who may not have the confidence present their calculation strategies in front of others. During the

project Mick has also been learning to use a graphics tablet when writing on online whiteboards during Skype tutorials with Shane and as a result he can now plan to use it to write fluently on the whiteboard in the classroom too. Mick says that he finds the use of the graphics tablet much easier than using the whiteboard pens -

'Well, before I had my graphics tablet I was finding it quite difficult to actually write some formulae or some questions on to the whiteboard but since I used my graphics tablet, it is just like writing on paper. It's a lot easier, especially if you are doing things like fractions and it's a lot quicker as well - and it's easier to read now whereas before it was taking time to write things on the board.'

In addition, Mick also plans to use a free mind mapping tool called **X mind** when he is working on the interactive whiteboard as it was one of the tools that was demonstrated during the project workshops for capturing ideas during discussion activities.

Individual or pair work

Whilst students are working individually and Mick is moving around the group to support them, he will ask students to try first to resolve any queries they may have by accessing the resources he has begun to organise on some topic-specific Padlet boards. These boards will contain resources such as worked examples, answer sheets, screencasts, quizzes and sets of flashcards for self-testing. In this way Mick hopes to encourage the more confident learners to work collaboratively or independently so that he has more time to work with those individuals who most need his support.

Exit Ticket

At the end of a session Mick plans to use a popular student response system called **Socrative** to create and present an online quiz to check their learning. When the learners have completed the quiz, the Socrative software presents all the data about each individual student's performance on a spreadsheet so that Mick can download and use it to idenitfy which types of maths questions may still be causing difficulty.

Blended learning

As Mick noted in the audio clip above, he has begun to create some topic-specific Padlet walls that learners can access after the session to continue to develop their skills. On these Padlet walls Mick plans to include sets of flashcards and quiz activities created on the **GoConqr** website. Mick also plans to use the **Edpuzzle** website to embed some quiz questions into video tutorials about key calculations. These Edpuzzle tasks, like the Socrative quizzes, generate detailed data on each learner which Mick can download to monitor student performance and support needs between sessions.

6. Project website

A multi-media version of this case study is available on the ACER project website. It contains:

- clips from audio interviews with the staff from Cambridgeshire Regional College who took part in the project;
- a selection of the digital resources they created;

Commissioned and funded by The Education & Training Foundation

- links to all the e learning tools they used;
- short instructional videos on how to use the tools.

To visit the case study on the project website click this link - http://tinyurl.com/ovadujz

If you would like to contact the staff from Cambridge Regional College who were involved in the Learning Futures project, please e mail the project manager, Mark Barnsley - mark.barnsley@acer.ac.uk

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