



An Excellence Gateway case study

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Cambridge Regional College – Building 24/7 learning: Virtual classrooms for Construction apprentices

Summary

In 2009, staff from Cambridge Regional College's Construction department first developed a range of online resources that would enable a flexible approach to learning.



Since then the college has created online resources using Articulate and Adobe Captivate, and students and staff have benefited in a variety of ways.

The learners can start courses when they want, can access resources at anytime, can roll on and roll off and spend more time in the workshop. This has resulted in improved achievement rates, with many students now completing their C Skills assessment a year early.

About Cambridge Regional College

Cambridge Regional College (CRC) offers courses in a wide range of subjects from hair and beauty to media studies, as well as apprenticeship programmes.

It is one of the largest providers of full-time further education for 16 to 19 year-olds in the region, with more than 4,000 full-time and 6,000 part-time students.

Over 80 per cent of full-time students are aged 16 to 18 years old, the remainder are mature students, studying on a range of Access to Higher Education and vocational programmes.

Facilities include purpose-built art and design studios, a £9 million motor vehicle workshop, hair and beauty salons, state-of-the-art catering kitchens and a modern, well-equipped sports centre. Commercial hair and beauty salons, a restaurant and a bistro, all based at The Park at CRC, provide student work experience.

The challenge

Before the Construction department introduced blended learning, apprenticeships were delivered on a fairly traditional basis with learners having fixed academic course start and finish times.

“On a normal day we would go through the targets which were up on the board. The class would view a short Powerpoint presentation, before becoming involved in the

main class activities which would include discussion, group work and active learning.” Mike Worth, Lecturer, Cambridge Regional College

It became very apparent to Mike and Teaching and Learning Development Manager, Steve Gayfer that by offering greater flexibility the college would be able to meet the demands of apprentices and their employers.

“We realised that students could complete activities when they wanted to with blended learning. There would be nothing to hold them back.” Mike Worth, Lecturer, Cambridge Regional College

For Mike and his colleagues, traditional teaching methods used to be limited by a lecturer having to deliver a subject to the whole group at any one time. This frequently resulted in courses having fixed commencement and completion dates and no flexibility regarding what could be delivered.

“As a teacher you have to be thinking all the time about new strategies to keep students engaged. You always have to have something new in your kit bag to walk into lessons with.” Mike Worth, Lecturer, Cambridge Regional College

Mike realised that with the online activities, the students would be able to complete a variety of tasks in their own way and at their own speed. They thought that with students being more in control of their learning they would buy into their studies more.

Steve worked with Mike to ensure trusted pedagogical approaches were used in conjunction with these new technologies so that learners could take full advantage of the resources.

Technology offered the opportunity to deliver a variety of construction-based subjects and units, but with access 24 hours a day, seven days a week.

“I thought it would be an improvement on traditional methods as the learners could look at any subject unit at any time, and would be able to control the pace of their learning.” Mike Worth, Lecturer, Cambridge Regional College

The activity

Mike first developed a keen interest in the use of ILT after he completed an LSIS project in 2009.

“Steve Gayfer, and myself undertook a research project as part of a LSIS RDF program and this helped to develop ideas regarding ICT.” Mike Worth, Lecturer, Cambridge Regional College

Later that year Mike first planned to develop a range of online resources that would enable a flexible approach to learning. They would be implemented slowly over a period of time so both learners and teachers could find their way and have time to tackle problems as they arose.

“We introduced our first online resources to full-time learners, which was the 1003 - Basic Building Principles unit around 3 years ago. We put it up on the VLE and asked them to have a go to see if they would actually complete the activities.” Mike Worth, Lecturer, Cambridge Regional College.

Soon afterwards, Mike and Steve delivered training courses to staff in the Construction and Engineering faculties, and a year later they introduced the first interactive resources to the apprentices.

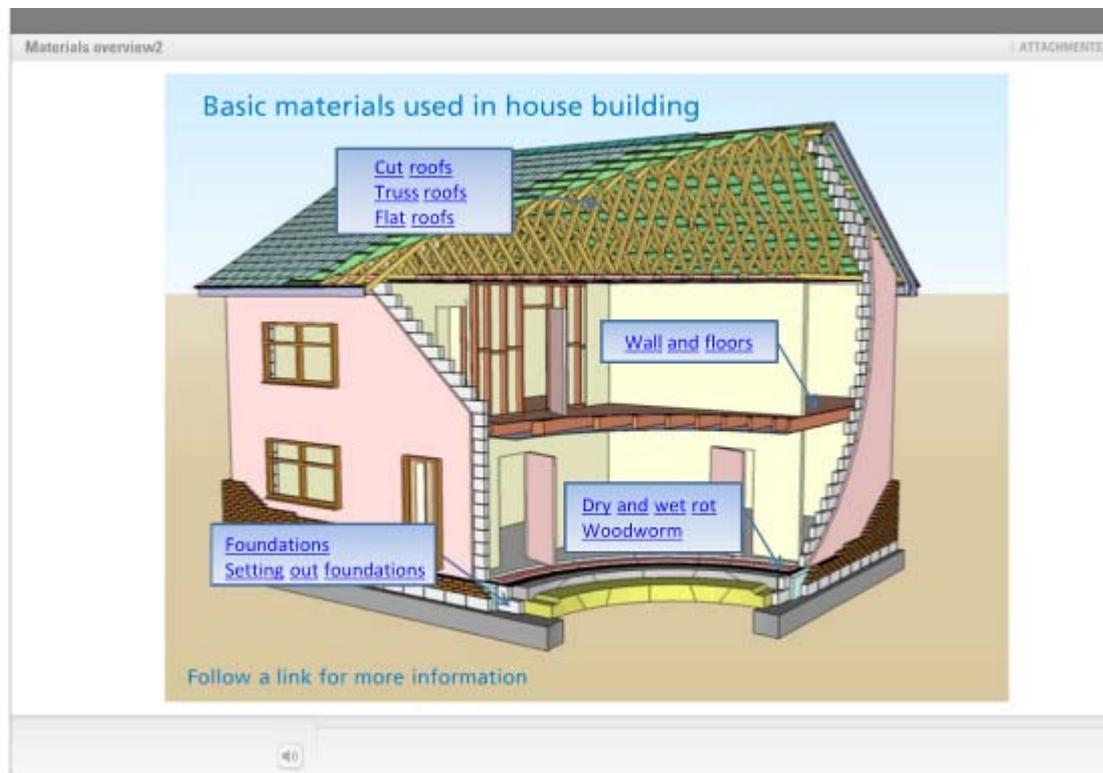


Figure 1- Interactive presentation from the 2003 - Building Principles Unit

"I then started developing some resources for unit the 2003 - Building Principles unit. As these apprentices have less time to study and spend in the classroom they love working through the resources at their own pace. Their main motivation is getting their work finished, and they could see that with flexible learning they could crack on, they wouldn't have to listen to a lecturer, and could just ask for support when they needed it." Mike Worth, Lecturer, Cambridge Regional College

Mike has created most of his online resources using Articulate and Adobe Captivate, which are both e-learning development programs.

"Used in conjunction with Microsoft Powerpoint, I have enjoyed playing around and developing activities in Articulate. I have published learning objects both separately and directly into Powerpoint." Mike Worth, Lecturer, Cambridge Regional College.

Drag the component labels onto the correct spot

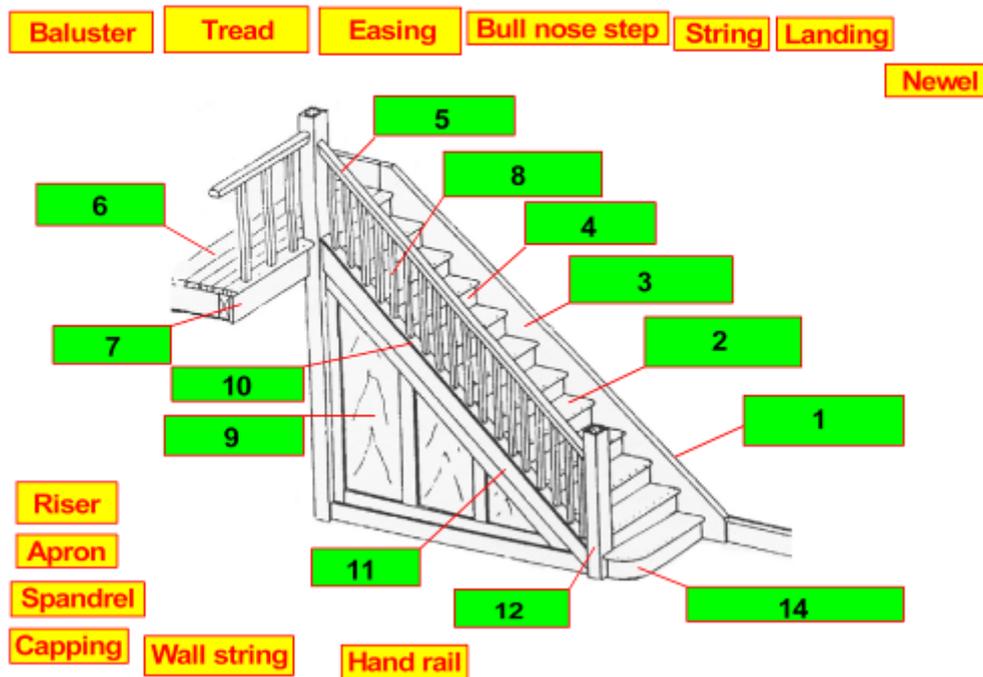


Figure 2- Flash animated drag and drop learning object

Within the learning objects, Mike has incorporated:

- Flash movies and learning objects;
- Web objects;
- Learning games;
- Quizzes.

Learners from the Construction department now using this flexible online learning system include Carpentry, Joinery, Furniture and Maintenance apprentices.

They are all able to contact Mike by email if they require support at home, or during weekends or holidays. He usually gives them immediate feedback and adds verbal tagging to their work, which works well for assessment for learning.

With an extensive portfolio of online materials, Construction apprentices are able to acquire the necessary knowledge so they can take their C Skills assessment whenever they choose.

They are able to access online:

- Assignments
- Resources
- Practice quizzes



Figure 3- Learners can work through online resources 24 hours a day, 7 days a week

Over the past three years, Mike has developed most of these online resources at home and at college. He has been grateful for the support he has received from senior management.

“Our Deputy Principal, Christine Sherwin has been very supportive, and has really encouraged me, and Head of Section, John Malone has given me time to build these resources.” Mike Worth, Lecturer, Cambridge Regional College

Mike has occasionally encountered obstacles when amending script behind Captivate and Articulate learning activities, but has been able to find help on various blogs.

“The Articulate blog is magnificent. If you are stuck you can send them an email and they will always respond.” Mike Worth, Lecturer, Cambridge Regional College



Figure 4-Online learning presentation created in Articulate

The outcomes

Since the introduction of the online learning environment, students and staff have benefited in a variety of ways:

- Increased flexibility of learners - they can start courses when they want and can roll on and roll off;
- Students are now more active and able to progress at their own speed;
- Employers can have staff commence learning at their convenience;
- The motivation of learners has improved, because they are able to finish their course of study when they want rather than having to work at the speed of the teacher;
- Increased progress rates of learners – they are passing courses sooner;
- Increased practical learning – learners now can spend more time in the workshop;
- Increased variety of courses on offer – as new learners can join existing groups

“Learners have greater flexibility, and employers are benefiting as a result. We’ve also been able to take on a greater variety of learners. In the past you couldn’t start a course with four learners, but we can now as they can go in with another group that’s started earlier.” Mike Worth, Lecturer, Cambridge Regional College

Most of the students are very positive about online learning as they can see that Mike has put a lot of effort into making them interactive, varied and personalised.

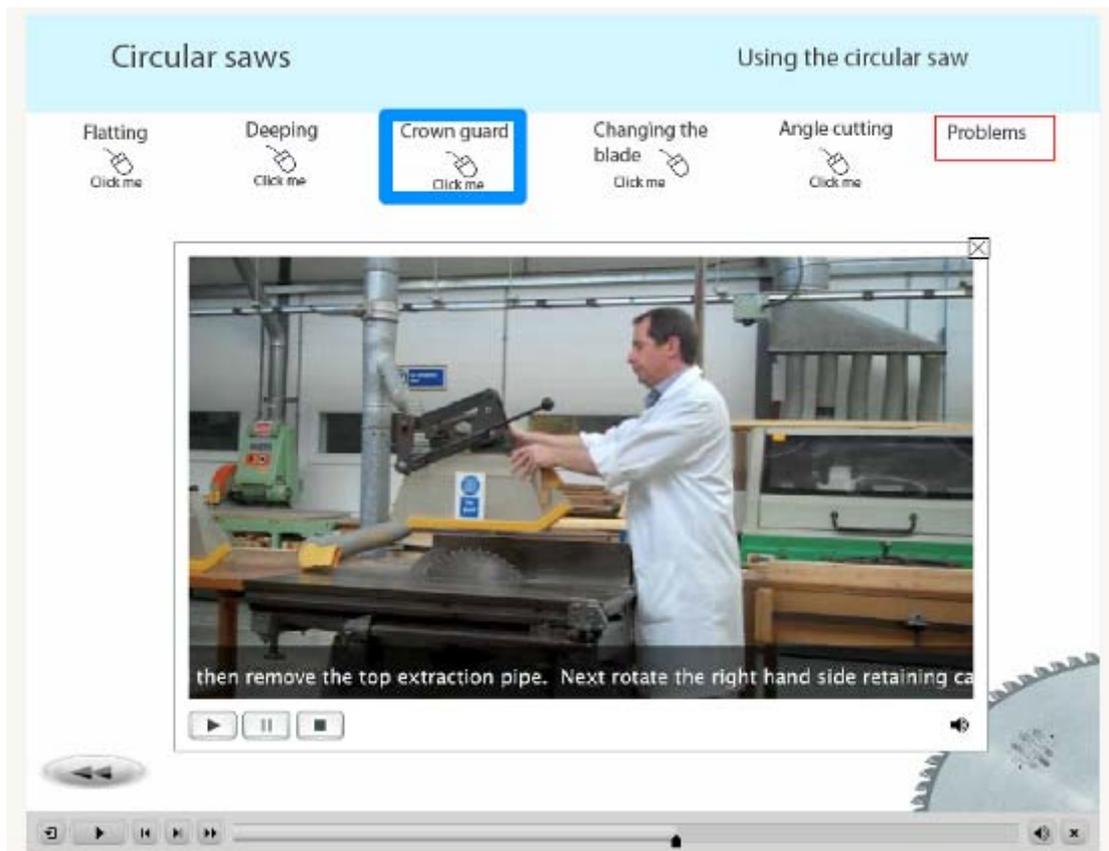


Figure 5- Mike has used the familiar surroundings of the apprentices' workshop as well as his own voice in videos

"I've used my own voice and recorded their workshops and classrooms in the videos and audio commentaries so the students feel engaged. Rather than using an anonymous narrator from America or copying out of a book." Mike Worth, Lecturer, Cambridge Regional College

Mike has also included learners' names in the learning activities, so when they log-in and complete the exercises the system will talk to them.

"The students love that. I have made each log-in personalised, so using the JISC TechDis voices, the system will now say, 'well done, John', or 'you only have to complete this section now, Steve'." Mike Worth, Lecturer, Cambridge Regional College

Students have given their feedback on the online learning activities.

"It's great that you can go back over the work you have already done to refresh your memory."

"I like the fact you can get on with things and there's nothing stopping you."

"You can just keep on with the activities until you get to the end."

Many of Mike's colleagues are now using the resources, and he is also receiving feedback from teachers who want more training and assistance.

"Mike's resources engage the learners to the point where they are now spending their own personal time working from home researching and completing online

activities. This has enabled the sessions to become more inclusive and learner focused where more time can be focused on the individual's targets and performance." Crispin Jolly, Building Crafts Lecturer, Cambridge Regional College

The impact

The introduction of online learning has resulted in more timely achievement for the majority of learners.

- 8 out of 10 students now complete their C Skills assessment a year early.

"As apprentices complete their theory earlier they can spend the half day that they used to have in the classroom in the workshop. This full day in the workshop is speeding up their skills development." Mike Worth, Lecturer, Cambridge Regional College

For Mike and Steve Gayfer, the online learning activities will have a massive impact on the future prospects of these learners:

- They can become more autonomous learners;
- They can start courses such as an NVQ level 3 a year earlier;
- They can develop as expert learners/researchers, which can give them the skills to study at HE level.

Mike and his team have changed the culture of learning throughout the Construction department, which has also had a considerable impact on the role of the lecturer.

"The lecturer becomes more of a facilitator when using this system. It's so well planned up front that the onus is taken off of the lecturer so the focus of the learning becomes the student. However, no matter how much online learning is used, you'll always need a vocational expert in the classroom for linking the practical element to the underpinning knowledge." Steve Gayfer, Teaching and Learning Development Manager, Cambridge Regional College

The new principal, Anne Constantine, and Senior Management have recognised the impact that Mike's work has made on the Construction department. He has now been given the role of ILCT champion with a remit to further develop this blended learning approach.

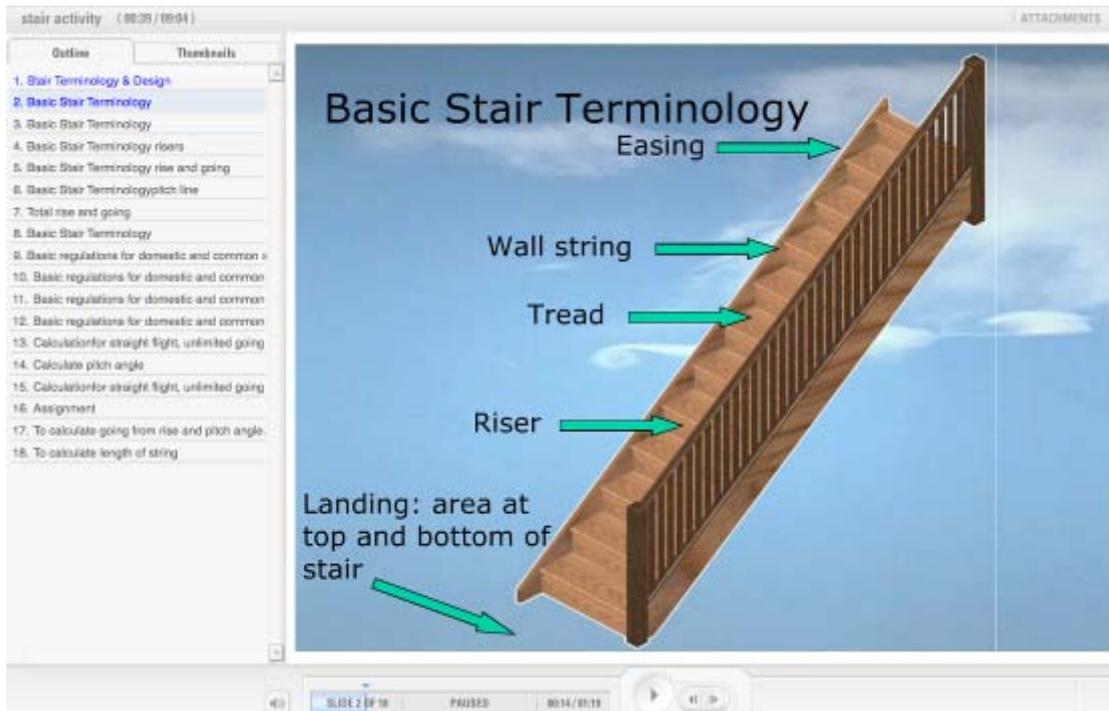


Figure 6- Students can find out about Construction terminology at any time using online resources

In a recent OFSTED inspection it was noted: “Technology and practical demonstrations are used well in most lessons to illustrate topics and often include the imaginative use of the college’s virtual learning environment. Learners value this environment highly and use it effectively to catch up on missed work and prepare materials for their next lesson”.

Following a co-observation with an Ofsted inspector, Temporary Assistant Principal, Penny Fawcus commented that she had observed, “outstanding use of VLE and IT resources to engage learners and differentiate pace and learner challenge”.

The lessons learned

Looking back over the past three years, Mike has learnt many lessons and has some helpful hints and tips for other providers.

- Cultures are slow to change;
- Systems need time to develop to keep up;
- Learners need to be helped to gain the skills that blended learning demands of them;
- Ask for constructive criticism so you can adapt your activities;
- Introduce blended learning slowly and steadily.

Mike believes you should try to spend more time introducing and assisting those teachers who are interested and enthusiastic about using blended learning rather than trying to introduce it to everyone.

“e-Learning used to have a rubbish reputation, as it just used to be about click and read, click and read, and there was nothing stimulating about it.

“Quality is vitally important, and the more varied and interactive you can make the learning activities then the better the response you will get from the learners.” Mike Worth, Lecturer, Cambridge Regional College

In the future Mike and his colleagues would like to develop a full range of resources that can be used across the all Construction subjects.

“I would like to continue making the learning activities more and more interactive. It would be great if it could be more about the learners generating what they do and making their own decisions.” Mike Worth, Lecturer, Cambridge Regional College.

Useful links

- [Cambridge Regional College website](#)
- [Articulate e-Learning blog](#)
- [Captivate e-Learning blog](#)

Links to related case studies

- [Colchester Institute - Virtual bricklaying lays the foundations for the future](#)
- [Thanet College: Carpentry lecturer combines Web 2.0 with Moodle to keep erratic learning on track](#)

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