Adult Education in Gloucestershire: Learners reaping the benefits of blended learning with AR and Xerte

Summary

Thanks to a combination of interactive learning objects, Augmented Reality (AR) and e-learning logs, learners at Adult Education in Gloucestershire have greatly improved access to resources and an exciting and engaging way of learning through their VLE. (virtual learning environment)

Tutors are much more engaged in using technology, particularly through AR and this has created a much more blended learning environment for learners.

Learners with specific learning needs have also benefitted from having access to more accessible context-relevant resources via their smart devices.

About Adult Education in Gloucestershire

Adult Education in Gloucestershire is a high quality provider of personal development learning for individuals and corporate training for public, private and voluntary sector employers.
The challenge

One of the main issues for the learning technology team at Adult Education in Gloucestershire has been how they can help to inspire tutors to use more technology in the classroom. The learning technology team additionally found that their Moodle VLE (virtual learning environment) was becoming more of a repository for documents rather than a facility to offer blended learning.

The team comprising of Amanda Cooper and Abdus Meah; both Learning Technologists, had the challenge of thinking about how they would facilitate the training of over 260 tutors, many based in remote locations in the Gloucestershire region.

In addition, the team have the continuing challenge of upskilling tutors and encouraging them to start developing their own interactive content.

Both Abdus and Amanda had to learn new types of technology, such as Aurasma and Zappar for creating Augmented Reality, which was a challenge due to the fact that they had to self-learn how to develop the content.

The activity

As part of the development of the project, Adult Education in Gloucestershire became involved in the European JOYAR project, which is a project designed to encourage adults to learn in a joyful way. This helped to introduce the learning technology team to AR and focussed on how to embed AR into teaching practice.

In terms of this case study, for those who have never heard of AR before, it is a type of technology that enables anyone with a smart device to view another layer or dimension of information or media. For example, an AR-enabled poster of a tennis player would allow someone with a smart device to scan that poster, which could then play a pre-recorded video of that tennis player in action. So effectively what is happening is the device is playing the video over the top of the poster, which makes for a far more interactive medium.

The type of media that can be embedded through AR is:

- Video
- Audio
- social media
- graphics
- GPS data.

The learning technology team initially developed content using Aurasma, which is a popular commercial AR solution that can be used to create AR objects within a browser-based environment. The team additionally used Zappar for creating AR and this app is now their preferred AR software solution.
A variety of different AR-enabled objects were created for use with business cards and paper-based documents. The tutors additionally created pamphlets, which contain the key learning points recorded during sessions, so that the learners can go away and recap in their own time.

In the example below, Amanda and her colleague Abdus Meah, created an AR-enabled Microsoft Word tutorials document, which enables learners to find out further help about Microsoft Word at the touch of a button. You can see just how much information can be accessed after the document is scanned.

AR has also been embedded into Moodle within electronic learning logs. This has allowed the team to take short snap-shots of learning performing different skills, as Amanda Cooper, Learning Technologist explains:

“For learners with ALDD (adults with learning difficulties or disabilities) we’ve been able to film them making things in an arts and crafts session or talking about their group experience whilst they are in the learning context. We’ve been able to embed that into the e-Learning log and then we’ve been able to show the learners speaking back by running the AR straight off the screen.”
Learning Logs have provided tutors the opportunity to reflect on their learners’ progress and provide the learner with an activity log that they can use to review their development, as shown below.

The team have additionally developed interactive content using Xerte, which is an open source content creation tool. Within the Xerte objects; also embedded into
Moodle, the team can create much more compact learning and include elements such as:

- Videos
- Links
- Quizzes
- Documents

The visual quizzes enable the learners to study different aspects of their courses, whilst being challenged. The design of the quiz is easy to use, being drag and drop.

"The beauty of Xerte is that it’s so easy to create compact learning so all of the learning materials are put into one learning object." - Amanda Cooper, Learning Technologist, Adult Education in Gloucestershire

The outcomes

One of the main outcomes has been the how tutors have engaged with the interactive learning content and AR. It has provided tutors with a set of tools that are immersive and encourages learners’ participation.

Amanda and Abdus have been instrumental in helping to develop the content that is benefitting both tutors and learners. Tutors also have a far greater range of tools and teaching aids to draw from, such as:

- Access to create their own AR and Xerte content
- The ability to supplement their teaching with quality interactive learning resources
- A way to record instant feedback and reflection during classroom activities
- Being able to point learners towards video content and quizzes
Comparatively learners have benefited from the interactive content because they have a way to easily recap on activities in the classroom and they can learn at a time and place that suits them.

AR has provided learners with an enjoyable way of accessing further information and content as well as extend the use and value of Moodle.

“When people actually engage in AR they are really blown away by it, so that’s been a great hook for us because what we’ve been able to do is hook tutors in using AR. It’s led on to the use of Moodle in a bigger way by more people because at the end of the day we need to engage the tutors, so that they can make the learning materials available for their learners.” - Amanda Cooper, Learning Technologist, Adult Education in Gloucestershire

The impact

It is clear from the statistics of Moodle usage that learners are using the resources more and regularly visiting the materials and tutorials outside of the classroom.

“The benefit here is that the tutor can deliver the key skills in the classroom and encourage learners to take control of their own learning by providing access to ‘refined’ content or ‘compact learning’ experiences.” - Amanda Cooper, Learning Technologist, Adult Education in Gloucestershire
Tutors are far more engaged in using interactive technology and starting to develop their own AR content to help their learners.

"I would say that it’s had a really positive impact across all our organisation and the statistics stand up to that and of course we can actually use the statistics then to demonstrate to ofsted that we are providing digitally available learning resources that do extend learning outside of the classroom." - Amanda Cooper, Learning Technologist, Adult Education in Gloucestershire
The main benefit of using Xerte and AR has been that learners are getting a lot more from their courses because they not only have greater access to resources, but a much more visual and exciting way of engaging in their learning. Learning can be reinforced to a much higher degree than before.

“Learners get targeted learning experiences and that is the beauty of creating learning materials and putting them together using xerte and a variety of videos and using AR and we put them on our moodle, that’s the beauty of it.” - Amanda Cooper, Learning Technologist, Adult Education in Gloucestershire

The learning logs have allowed learners the ability to login to Moodle and record their own progress as well as capture achievements on a weekly basis. This provides an accurate log of progress and captured tutor feedback to allow the learners to apply and develop new skills effectively.

<table>
<thead>
<tr>
<th>Date</th>
<th>What have you done?</th>
<th>What have I learnt?</th>
<th>How can I use it?</th>
<th>What Next? (Tutor’s Feedback)</th>
</tr>
</thead>
<tbody>
<tr>
<td>27/11/13</td>
<td>Create page and paragraph breaks.</td>
<td>I have opened documents and learnt how to move lines and paragraphs. Break up a paragraph to create a new paragraph. Learn how to start a paragraph on a new page. Using the VLE to report what has been done.</td>
<td>This can be used to write letters, apply for jobs and for any advertising. The VLE can be used to show the tutor what has been achieved.</td>
<td>Tutors’ Feedback: Having observed you working, and seeing your completed work, I am very pleased to see the great strides you are making. I am impressed with the initiative you’ve demonstrated by using the VLE to submit a question re: indissing pages in the exercise workbook and receiving a feedback answer to your question. So well done for taking the lead on that one. Create a word document, and insert some texts covering at least half the page. New experiment with different paragraphs’ alignments and line spacings. Also, continue to explore the VLE by checking for my feedback, and use it to interact with and ask me questions/queries. (RF)</td>
</tr>
</tbody>
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Screenshot showing an AR-enabled Aurasma ‘Dragon’s Den’ style videos, the above image can be scanned by following ADDAR using the Aurasma app

Screenshot showing an example of a log and the feedback recorded by the tutor
The Apprentice Journey

Screenshot highlighting the apprentice journey. The above image can be scanned using the Aurasma app, through following the ADDAR channel.

The lessons learned

Identify keen tutors at an early stage, who will embrace new learning and tools so that they can receive plenty of training in advance. Identify the right context for the content and how it can be put together so that learners can get the most out of the resources offered.

Useful links

- Adult Education in Gloucestershire
- Jisc RSC South West
- Xerte
- Aurasma
- Zappar
- JoyAR European project

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