LSIS Leadership in Technology (LIT) grant based intervention
Impact study template

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LIT Project title	Augmented Reality in Teaching & Learning CPD

The project	
What problem or issue you were trying to resolve or improve with this project	Our inspection report from January 2011 supported an outstanding college but did identify a development area in respect of increasing the amount of good and better teaching by increasing teachers' questioning techniques. Against this backdrop, we wanted to develop some new learning materials to support improvements for staff who are graded at 2 or below through the Teaching & Learning Observation process or who are new to teaching. The plan was to create materials so that they can improve their own teaching through CPD whilst recognising that they find it difficult to shadow grade 1 teachers due to timetable constraints and busy schedules.
Why did you go for a technology-based solution	The college had already begun to develop the use of Augmented Reality (AR) as a technique to bring printed materials to life, starting with its prospectus for 2012/13 and again for 2013/4. Furthermore, we had previously received funding via JISC which allowed us to develop some high quality learning materials for a single curriculum area (plumbing) and the impact of those materials on teaching and learning persuaded us that further development of Augmented Reality would be good for this project. However, to create the CPD materials, more research and development would be needed. Because it is available on most mobile devices, (Phones, Tablets etc.) employing the use of AR technology meant that the CPD materials could provide live examples of teaching and learning techniques without staff needing to arrange to observe actual delivery. This meant that they could look for improvements to their own teaching and learning at a time and pace to suit their own needs.

What did the project cost: LSIS funding + your organisation's contribution	The project funding was £6,000 including £2,000 of mentoring time. This funding was sufficient to ensure the project aims were met and included staff release time plus the technical expertise to carry out the filming, design and production work.

Management time was provided for the project as the college's contribution and included time spent by the project lead and technical lead at meetings with the mentor and LSIS advisor as well as attending LSIS events in respect of the project. |
| Describe what you did and what happened | The original action plan identified the development of 6 AR posters that could be activated using our "living leARning " app using Apple handheld devices. The resource would provide embedded films on 6 different CPD topics within teaching and learning.

A mentor with specific expertise in film and camera angles was appointed to help further develop the AR skills of our specialist tutor (Dan Hodge, Digital Media tutor).

Development of the technology with the project mentor resulted in an agreed change to the development of just one poster containing 6 different augmented reality "auras" and the incorporation of interaction with the user. In effect this meant that the user (the AR viewer) could access just one "aura" and then choose a path through the other five "auras" without leaving the original.

Throughout the project, a blog (using Tumblr) was created so that each stage could be recorded for the wider project team to view. The technology was discussed through this medium and the thought processes leading to the final product were noted and were of great interest to the project team. http://kc-lit.tumblr.com/

A tutor was identified who has been graded as outstanding for a number of years and he worked with the team to agree the Teaching and Learning techniques that would work. Filming took place in January 2013, based in a busy catering production kitchen with three levels of students working together. Each video clip was then edited and matched with a second clip where the tutor explains what he is doing.

A late addition was a final clip for each topic on the key learning points from each clip against the following topics: |

	• Help - drawing out key learning and prior learning. • Stop - better to stop and start again than continue with a mistake. • Time - problem solving in a timed situation. • Standards - working to industry standards. • Demo - checking of basic understanding through demonstration. • Challenge - working to push more able learners. Once the filming had been completed and the editing agreed, the final stage was to use the AR technology to embed the auras into the basic design of the poster and set up the link that can be activated by either the college's own Living LeARning app (i-phone and i-pad) or Aurasma's app. This final stage was complex and technologically challenging but eventually the product has been completed and ready to be launched. The final outcome of the project, the Living LeARning Teaching & Learning poster was launched at the LiT Conference in Birmingham on 5th February 2013. See blog (above) for some feedback.
	The benefits and impact
What benefits/ impact has the project had on:::	**a. the work/ effectiveness of your organisation** The creation of a highly professional resource to be used for teaching and learning CPD has yet to be tested for impact in respect of improving Teaching and Learning grades but will continue to be used to support teachers who need to improve their classroom techniques. Early testing by Teacher Education students has suggested that the resource will be very useful for improving the confidence of new teachers and will be a highly valued resource within this team.
	b. the cost/ efficiency of activities As above, there will be a time saving by staff using the

	resources when it best meets their time availability and to overcome the difficulties of staff being required to observe Grade-one tutors. Staff will be able to access the resource from home or staff room and will provide them with greater opportunity to view and re-view the materials when it best meets their need.
	c. any other aspect of your work The development of the materials has had a significant impact on the college through recognition that the college has a very high level of expertise in this area of technology development. The LiT Grant funding received for this project has allowed the further development of this expertise – we think to great effect.
What contribution to the success / smooth running of the project was made by:	LSIS funding a little / some/ a lot / <mark>essential</mark> Your mentor a little / some/ <mark>a lot</mark> / essential LSIS Associate a little / <mark>some</mark>/ a lot / essential
Do you have any comments on the funding, mentor or LSIS Associate.	The funding was essential to enable us to develop this resource but we feel that it would have been better if we could have managed the funding ourselves and to decide where it would best be allocated (reference to £2k for mentoring).
What lessons did you learn / what tips would you give to other providers	Time factor in completing a project, especially where it involves very busy tutors, can make it hard to meet the project deadlines. Projects that start in September can take a low priority against the pressures of the start of the academic year.
Telling others	
What have you done to share /disseminate this project with others in the sector	We have taken part in a number of conferences to share our good practice in respect of augmented reality as follows: • Living learning Teaching & Learning poster launched at the LiT conference 5th February 2013. • BETT Conference London 1st February – provided an overview within the HE learning section • Jisc RSC NorthWest conference and two webinars

Provide a quote on your experience of the LSIS LIT project.	We have enjoyed running with this project to take the technological opportunity presented by Augmented Reality into the development of some very high quality and interactive CPD materials to support improvements in teaching and learning.
Are you happy for us to use this and your contact details for marketing and publications?	yes
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Please email all case studies to eleadership@lsis.org.uk by 15th March 2013