



ABC LD Toolkit 2018 Part 1 (of 3) Arena Blended Connected Learning Design

Introduction to the ABC LD workshop

Clive Young and Nataša Perović
UCL Digital Education



This series of guides together with accompanying videos and workshop resources form the 2018 ABC Toolkit and was part-supported by the HEFCE Action for Curriculum Excellence project 2016-18



1. A quick overview of ABC

How can we engage and enable our time-pressured academics to design rich blended and online courses? Most leading research based universities nowadays have aspirational strategies to develop future-looking, digitally rich, flexible courses attuned to students' expectations for engaging, professionally related learning experiences. Yet we know only a few of our pioneering academics currently have the design skills, technology knowledge and above all time to remodel their programmes to the creative standards the future of education demands. Deep institutional change must by definition engage mainstream academics but current methods of learning design consultancy and 'away-day' workshops are support-intensive and time consuming, therefore poorly scalable. This contradiction frustrates educational ambition at all policy levels.

Recognising the need for a radical rethink, in 2013 the digital education team at University College London (UCL) pioneered a 'light touch' alternative team-based approach. 'ABC' is the result, a high-energy hands-on workshop. In just 90 minutes teaching teams work together to create a visual 'storyboard'. The storyboard is made up of pre-printed cards representing the type and sequence of learning activities (both online and offline) required to meet the module or programme learning outcomes. Assessment methods, cross-program themes and institutional policies are all integrated into the process. The key to this approach is pace, engagement and collaboration. ABC has been found particularly useful for new programmes or those changing to an online or more blended format. The approach generates high levels of engagement, creative informed dialogue and group reflection about curriculum design among even time-poor academics.

The intentionally paper-based process itself is as significant as the outcomes.

Storyboarding is an established technique from film-making that illustrates a narrative as a sequence of scenes. The ABC version provides visual overview of the learner experience externalising the course structure therefore making it immediately discussable by the team. The storyboard's sequences are learner activities, classified into six type cards using a simple and easy-to-learn taxonomy based on the highly respected 'Conversational Framework' created by Prof. Diana Laurillard (Institute of Education, UCL). Example activities are provided but teams are able and encouraged to add their own activities to the cards. Trials showed the creative hands-on, analogue format of the workshop together with the presence of colleagues and support staff stimulates a wide-ranging discussion. This generally includes the purpose of the course or programme, teaching methods, alternative technologies and assessment methods and above all the student experience. The storyboard approach also reinforces the notion that the design is a purposeful, discussable and transparent narrative describing the student experience over time.

Extensive testing at UCL (as part of the HEFCE project) and other institutions has shown high levels of transferability, academic enthusiasm and satisfaction. The workshops run so far seem to have immediate impact in terms of stimulating a level of collaborative 'educational design thinking' in a range of academic contexts. This set of guides has been

funded by HEFCE to help other institutions adopt and adapt the ABC method to support educational change in their context.

2. ABC in the institutional context



University College London

Context is critical to ABC, and we know its successful adoption depends on alignment to the specific requirements of the new institution. In these toolkit guides we will focus on the ‘classic’ format of the workshops and so a quick review of the UCL environment may help to explain how it developed in the specific way it did.

University College London (UCL) is a renowned research focused and multidisciplinary university with over 38,000 students and 6000 academic and research staff. One of its key strategic aims as expressed in the current Education Strategy (UCL, 2015) is to be a global leader in the integration of research and education, underpinning an inspirational student experience. These ambitions to enhance curriculum quality are represented especially by the Connected Curriculum initiative (Fung, 2014) and are reinforced by the use of data from external benchmarks such as the UK National Student Survey (HEFCE, 2016a). Top down interventions are augmented by widespread grassroots interest and activity in blended learning and technology enhanced flexible modes of study.

UCL’s Digital Education team, together with our Arena academic development centre, work closely with academics to review and develop new curricula. The university’s Arena suite of courses for probationer and established teachers is also now well established. This prepares

participants apply for a UCL Arena Fellowship and hence a Fellowship of the Higher Education Academy (FHEA).

All UCL modules have been mandated to provide a Moodle course since 2014(?), and UCL's E-Learning Baseline has now been mandated. The Baseline outlines minimum and aspirational (Baseline +) features of online learning provision. Despite being previously voluntary the minimum is reasonably well established and includes sections on accessibility, online course structure, orientation, communication and assessment. Lecture capture, again voluntary, has proved very popular with students and we are moving to an opt-out in the near future. The recordings are delivered through Moodle.

Digital resources, activities, communications and assessment can now be considered an integral component of the UCL student experience. In a 2016 survey 46% of UCL students considered e-learning an essential component of their learning activity, up from 33% three years ago, with a notable swing away from administrative and supplementary use towards integrated and fully online modes. Online methods are associated with many of UCL's key educational aspirations; enhanced assessment and feedback methods, building a connected student experience and active research-based learning providing opportunities for collaboration and enabling students to be producers (Fung 2016).

That said, in terms of curriculum design change has been incremental with gradual improvements, especially in e-assessment. It could be argued however that technology has been used to support traditional models of teaching, often based on a 'knowledge acquisition' model in which there is a focus on 'content' where students acquire knowledge of subject area vicariously from experts. While Moodle and Lecturecast are hugely valued by our students in terms of information access, it has long been recognised that while educational technology could enable more participatory and active learning approaches, UCL lacked a transformative educational model and process to drive it. Introduced in 2016 (?), The Connected Curriculum provided this missing transformational context and impetus but also allowed UCL to re-frame existing content-based approaches as a dynamic component of a richer connected learning environment.

The Connected Curriculum presents an engaging and transformative model of research-based education (RBL) closely integrated within the UCL academic community. While it is a unique formulation, its underlying ethos of active, inquiry-led and socially situated learning relates closely to many of the principles that underpin digital education both at UCL and in the wider domain. The Connected Curriculum has become an important driver to enable UCL's strategic ambition to, "become a world leader in the use of technology to enhance the student experience and the quality of learning" (UCL 2014).

3. The origins of ABC

The Digital Education team at UCL has many years of experience in supporting academics through the process of educational redesign. Although our expertise is in digital methods for teaching and learning we always try to ground interventions on solid pedagogical principles. However we recognise that enhancing conventional face-to-face approaches to teaching towards more blended, online and distance-learning formats is a dauntingly challenging task for academics and learning technologists alike (e.g. Beetham & Sharpe, 2007; Ellis & Goodyear, 2009). As we know, classroom and online environments are equally complex, subtle and hard to define, so transferring from one mode into the other is fraught with pitfalls, especially for faculty with little experience of online course formats.

This was brought to sharp relief for us in 2013 when the Digital Education team were asked to support the development of an ambitious new paramedical undergraduate programme. Although the outcome was very successful, we realised we did not really have a structured approach to learning design. This meant that the discussions were often reactive, unfocused and somewhat frustrating for all sides.

In this dilemma we recognised Beetham's (2012) general critique of curriculum design in higher education in that "practice and process had often been local, ad hoc, unexamined, and unresponsive to changing demands". As Nicol (2012) also acknowledged "Curriculum design in higher education is not a formal activity and there is little support, formal or informal, provided in most higher education institutions to help academics become better at designing learning activities, modules and courses". However Beetham had cautioned "although change was seen as necessary, it was difficult to bring about in complex and devolved institutions".

We therefore began to look for a lightweight, streamlined process that would result in well-designed courses, aligned to institutional mandates but also based on sound educational principles. We realised that time was the critical factor for large-scale faculty engagement. While 'away-day' intensive formats such as Carpe Diem (Salmon and Wright, 2014) were known to be effective we felt it was unrealistic to expect faculty and support teams, at least initially, to commit more than a few hours to the design process. For a process to be adopted at UCL it would have to show time efficiency for curriculum teams and other stakeholders.

Provisionally UK higher education has extensively researched in just this area. Over four years the JISC Institutional Approaches to Curriculum Design Programme (JISC 2012) evaluated a range of institutional change methods. It was noted that "particularly successful were face-to-face workshops where curriculum teams could work intensively on a module or programme of study, developing graphical representations of the curriculum such as timelines and storyboards" (Beetham, 2012).

The University of Ulster's Viewpoints (University of Ulster, 2012) project met our criteria. Their curriculum design team had pioneered a storyboarding approach, using a course

'canvas' along with sets of cards that could be selected, sequenced, annotated, and used as discussion prompts in the outline design of a course 'timeline'. Viewpoints had developed a number of card sets based on for example principles from the Re-Engineering Assessment Practices (REAP) project (REAP, 2010) and the SCONUL Seven Pillars of Information Literacy model (SCONUL 1999; Goldstein, 2015). Nicol (2012) had thoroughly evaluated the project and found it had encouraged reflection and creativity, helping "identify solutions to curriculum design challenges and to maintain an educational rather than a content focus, a learning rather than a teaching focus".

4. How does ABC work?



ABC workshops focus on collaboration and discussion

The ABC curriculum design method (Perovic and Young, 2015) built on the Viewpoints principles and was developed in 2014 as a ninety-minute hands-on rapid-development workshop for UCL module and programme teams. The name itself has significance as it references Arena, UCL's popular faculty development programme, blended learning and the Connected Curriculum, mentioned above as UCL's major strategic educational initiative. The Connected Curriculum itself is represented with six dimensions of learning through research and enquiry and is usually articulated as a series of student activities that "close the divide between teaching and research" (Arthur, 2014) and "integrate research into every stage of an undergraduate degree, moving from research-led to research-based teaching". To align

with the Connected Curriculum and its foundation of activity-based learning a new card-set was developed based on Diana Laurillard's (2012) notion of six 'learning types', derived from her theory-based Conversational Framework. The six learning types are acquisition (or read/watch/listen), inquiry, practice, production, discussion and collaboration, and these types form the ABC six-card set.

In addition new workshop documentation was created and the Viewpoints workshop sequence adapted. At least two or three members of the team involved in the programme or module development attend a workshop. It is required that they bring the module specifications (or programme overview) with learning outcomes to the workshop.

The ABC workshop is organised in a very structured and time-conscious manner. Most of the 90 minutes is spent on group activity but it starts with a brief presentation introducing the toolkit elements and their pedagogical background.

The first task for the teams developing either a module or a programme is to agree on a tweet size description (strapline, unique selling point, value proposition etc.) of the module/programme and write it on the workshop graph sheet. Team leaders also report this back to the facilitators.

The participants then draw the rough "shape" of their programme (as they envisage it initially) as represented by learning types on a spider graph (e.g. how much practice, or collaboration) and the envisaged blend of face-to-face and online.

Arena Blended Connected (ABC) curriculum design workshop

Programme: Arena digital
 Module name: use of videos in teaching
 new module: module review
 Academics: Anna Moore, Jon Gribbel
 ETE workshop facilitators: CY, NP
 Workshop date: 25th June 2015

Module summary (tweet size description of your module):

All you need to know about: use of videos in 21st century teaching

RETWEETS

Learning types activities graph

How do you envisage your module will look on the graph above? (in red - at the beginning of the workshop)
 Your module activity graph at the end of the workshop (in blue)

online |-----| Face to face

Blended graph

Where do you want to be on the scale (in red)
 What is your position at the end of the workshop (in blue)

Tweeting and drawing the module 'shape'.

Next the team plan the distribution of each learning type by sequencing the postcard-sized cards along the timeline of the module, represented by a large A1 sized paper 'canvas'. Often activity sequences are repeated and the course is usually represented by two or three patterns of activity.

With this outline agreed by the group participants turn over the cards. On the back of each card is a list of online and conventional activities associated with each learning type and the team can pick (by ticking) from this list or write in their own. The type and range of learner activities soon becomes clear and the cards often suggest new approaches. The aim of this process is not to advocate any 'ideal' mix but to stimulate a structured conversation among the team.



Two stages of ABC designs

Once learning activities are selected and agreed, participants then look for opportunities for formative and summative assessment. These are represented by affixing silver (formative) and gold (summative) adhesive stars to the activities. By this point module/programme development teams have an overview and the details of the learning and assessment activities on the module/programme.

Now they can go back to the graphs from the beginning of the workshop and adjust the shape of the module/programme on the learning types and the blend graph and discuss any changes.

The final stage is to photograph the new storyboard. The storyboard can then be used to develop detailed student documentation, describe student 'journeys' or outline a course in our virtual learning environment, Moodle.

Teams are strongly encouraged to write an action plan and take all the sheets and cards they used with them. The action plan can include further input from the Digital Education support team, additional resources to be gathered, identification of copyright issues etc. The evaluation of the HEFCE project in 2017-18 showed this to be a particularly important aspect of the workshop.



Module leads feed back to the whole group

Nowadays at UCL we try to run ABCs for whole programmes, with the core and main optional module teams invited to work together. The workshop is then extended by thirty minutes to a two-hour session. This enables the programme leader to provide guidance to the whole programme team on issues to address together. This may include a focus on the Connected Curriculum, diversity assessment, issues raised by students, changes in professional qualifications and so on. At the end of programme sessions module leads explain their designs briefly, providing opportunities to explore progression, through lines of activity, implementation of specific strategies. This adds considerable value to the workshop and provides a unique overview of the student experience across the programme.

5. Evaluation of ABC

Initial Piloting and feedback 2015-2016

The ABC method was piloted throughout 2015 and early 2016 in 23 sessions representing over 55 UCL module teams and some 180 faculty members. A range of disciplines was represented from medical sciences through engineering to education and social sciences.

An ABC workshop and resources variant for continuing professional development (CPD) courses was requested and produced. This includes a basic resource cost exercise. The aim is to generate a discussion on the need to balance cost and activity design, rather than produce a detailed costing model. Activities are given a resource indicator (one to three “stars”) depending on the time, cost or human investment needed to produce. Thus videos and animations are three-star (expensive), quizzes two-star and forum-based activities one or two-star depending on the moderator support envisaged. All UCL-funded CPD courses are required to attend an ABC workshop to begin to design their courses.

The promotion of the ABC workshop in UCL is via presentations at UCL conferences and faculty education days, through Centre for Advancing Learning and Teaching colleagues and increasingly by personal recommendation. The ABC curriculum design facilitators are usually invited by a programme lead to facilitate workshop for module teams.

Participants were asked to give feedback on camera and almost without exception, participants found the experience positive, engaging and valuable. A number of key points arose from their comments.

As the JISC project had found, the moderated workshop setting provides teams with “a neutral, supportive and non-threatening context for sharing ideas, away from the pressure of formal approval events and also minimising markers of staff roles and status” (Beetham, 2014). Indeed we found the level of pedagogic sophistication expressed to be remarkably high. The format of the workshop and presence of colleagues and support staff clearly stimulated wide ranging discussions of the purpose of the module or programme, teaching methods, alternative technologies and assessment methods and above all the student experience. The storyboard approach reinforces the notion that the design is a narrative

describing the student experience over time. Participants felt this would help communicate the dynamics and purposes of the module activities to students. Generally participants appreciated the opportunity for reflection on teaching, as one put it, “a rare commodity since we are all so pressed for time”. Representative feedback comments are listed below.

‘We haven’t had such level of detailed discussion as a team. I think the structure and the materials are facilitated well.’

“I think it was good to take a step back from the content and look at the varied type of activity.”

‘It is a good way of focusing on creating the balance within a course.’

‘It makes you think about: OK, we are going to use this technique, but where, how, for what and how does it fit with everything else? And this is the way into that, I think.’

‘It helped us formulate in our own mind the course structure. Yes, very useful’.

‘It was an eye opener. I found it really useful to think about categorising how the learning objectives will be delivered and assessed, and examining the variety of ways that these can be achieved. It made me think more deeply about what skills the students can develop by making them responsible for their learning journey and not simply the content that needs to be delivered to them’.

Three areas, around technology alternatives, novel modes of assessment and links across module reoccurred spontaneously, with little prompting from the moderators.

‘Made me more conscious of a formative assessment, which really did not occur to me before.’

‘It reminds you of all different formats that you can use, rather than sticking to the same old same old.’

‘This has been extremely useful. Not only that we start to think about individual modules and how we can use electronic resources, but it makes us think about the degree together, rather than as separate modules’.

Again as predicted by JISC, and recognizing this as an ‘ironic outcome of a technology-based programme”, the face-to-face nature of these discussions was a key part of the engagement with and success of the process. Exactly as Viewpoints had found there was a real haptic and democratic value in “sharing physical resources that could be selected, handled, annotated and (re)situated by users allowed a collective solution to emerge in real time/space” (Beetham, 2012).

HEFCE Evaluation 2016-2018

Following our successful bid to the HEFCE Catalyst Fund (HEFCE 2016b), which aimed to drive innovation in the higher education sector, Digital Education and CALT worked together on the UCL Action for Curriculum Enhancement (ACE). UCL ACE was one of 67 HEFCE-funded projects aiming to develop and evaluate small-scale, experimental innovations with specific cohorts of learners and will run for a period of 18 months. The project brought together our commitment in the UCL Education Strategy 2016-21, the development and implementation of the Connected Curriculum and the ABC learning design process. A full “ACE Evaluation Report” (2018) is published on the project web site.

The HEFCE funding enabled us to look at the effectiveness and potential impact of ABC in partnership with colleagues from UCL’s Arena (educational development) team. We deliberately linked the evaluation to UCL’s Connected Curriculum (CC) educational approach, considering that engagement with the learning design process was closely linked to institutional strategies and initiatives. We also extended the evaluation to explore uptake at other UK universities. Data was gathered online survey, focus groups, and interviews. It was not feasible, as initially hoped, to investigate the student experience or the direct impact of ACE on students as the modules and programmes which staff were developing had not been running long enough to generate data on student outcomes. Nor did we have baseline (pre-intervention) data. However, we were able to explore the perceptions of UCL staff and UK educational developers from several institutions in relation to enhancement. Interviewees were motivated to choose ABC because of their positive impression of the workshop: “I saw a video online and saw people having fun, well they were smiling anyway and that looked good ... and I thought ‘ah, nice and structured’”.

In the survey of ABC participants 90% of respondents agreed that their experience of the session they attended was positive, 54% expressing strong agreement. 71% agreed that the workshop enabled them to enhance the curriculum. Interestingly only 18% thought more preparation before ABC would be useful (e.g. videos outlining the workshop and examples of student learning activities/assessment tasks). Many felt that preparation might be too time-consuming so ‘might put people off’. Interviewees valued the stimulus to design active student learning; the scope for productive interaction, where possible with the opportunity for different module teams to work together, so modules became part of a holistic programme; inclusivity in terms of adapting to the needs of course designers with different levels of experience; the well-designed resources which enabled the visualisation of modules; good, supportive session facilitators and high-quality presentations; the feeling of progress being made; and enjoyment, excitement and engaged participants.

The paper-based approach of ABC was generally liked. One interviewee commented:

‘I thought it worked really well, particularly actually having the paper, to move those bits of paper around to have a visual representation of the module I think was really, really helpful, as opposed to just sitting with a word document or just sitting round a table and discussing, but actually being able to visualise the module ... was really,

really helpful'. Another commented: 'The set up with the big posters and the post-it notes and the different colours were great, really, really helpful and people took pictures of it...'

Many interviewees commented on the 'buzz' in the room and enjoyment of the ABC workshops, for example:

'it's just a fun workshop so it's colourful, it's paper based, you're moving things around and you're feeling things, people are excited, if there are tutors and there are many of those who actually have a fear of technology type things, well they don't have to worry about it in a workshop like this, ... it's alive, you can see it; people are talking and it's great to see that...'

However the 90-minute format has its limitations. 64% of respondent on the survey agreed that it would be helpful to have follow up support after the workshop, such as online resources, specific feedback on the developing curriculum and more sessions for the same teams. One respondent recommended 'a concrete list of actions generated from the workshop' with facilitators providing feedback on it. One learning technologist who participated observed 'you're going to have to have some kind of proper follow up that's part of a consistent process, or ... nothing happens from the workshop, which is a real shame because there's a lot of potential there and excitement'. On the other hand interviewees recognised that it would be challenging to find the time for a follow-up group session, although a 'revisit of the initial plans a few weeks in might be a nice thing to try' but 'the issue of staff having time to all commit to being in one place for a whole afternoon is a big one'.

The parallel sessions related to the CC strategy were also very well received, and participants identified opportunities to align the two frameworks. 86% of respondents agreed that their experience of the session they attended was positive and 65% that sessions were useful to them in their role designing curricula. 66% agreed that sessions enabled them to enhance curricula. The opportunities to network learn from others were highly valued by participants on both interventions. The workshops were a good opportunity to learn from others, sharing practice. One participant on the CC sessions wanted to 'hear other people's practices, because I wanted to get new ideas and to have some new practices which I could incorporate in our courses or modules. The time limitations of both modes of engagement were highlighted.

Interviewees provided several examples of the positive impact of the ABC workshop on curriculum design and enhancement. This was definitely the case in relation to student participation in the design process. They 'contributed to the design of their own module' and also enhanced it. The focus on different ways of learning was seen to heighten students' awareness of the range of approaches. One participant also pinpointed enhancements in terms of students 'working cooperatively' and using Wikis, and less instances of students sitting passively listening to lectures. In general terms, the ABC workshop was seen to have a positive impact by one respondent, but as part of 'a whole sweep of workshops and training events' making it difficult to 'disentangle and say "this workshop did that"'.

The first ABC workshop run at UCL on 9 March (a second one ran on 20 April) provided an opportunity to run a focus group with educational developers from three institutions in England and one in Scotland. All had selected ABC workshops as a catalyst for affecting strategic educational change in their universities. One university was 'embarking on a really ambitious curriculum change programme... reviewing all of our undergraduate programmes by 2019 ... we needed something that was quick and easy to use'.

The majority of developers used ABC to integrate technology-enhanced learning into module design, either blended or wholly online. They worked alongside learning technologists running collaborative workshops and chose ABC because it 'was learner-centred and ... easy for staff to work with in the time constraints'. The group made a range of positive comments about the ABC workshops. They found the ABC format effective: 'I think it's not just hands-on but it helps people get to an end point very quickly rather than discussion going round and round for three hours ...' and powerful because 'it encourages that dialogue'. Another developer confirmed:

'...for us it was incredibly positive'. ... 'after 90 minutes we couldn't stop the academics and I don't think I've ever come across a workshop where they didn't want us to stop'. ABC workshops also 'enhanced [participants'] understanding of pedagogy ... because they're using that same language'. Participants were also enabled to 'identify what they're doing ... and that visual impact at the end very much helps them'.

This group of ABC adopters were taking a more measured approach to adoption. One institution ran ABC workshops on a rolling 'ongoing basis' with central and school-based support. Developers described running 'a refresher' if needed and seeing module developers regularly – 'they're always in touch at some point'. At another institution, the action plan generated at the ABC workshop was shared. For instance, 'one of our learning technologists definitely takes a copy ... and then will follow up ...'. The educational developers had also made purposeful efforts to embed educational strategies in their versions of the ABC workshops. ABC workshop users in one university confirmed the centrality of this approach to taking action for curriculum design: 'At our institutional review, we will be citing ABC as one of the key designs shaping and guiding our work.'

Several of the developers were certain that staff had enhanced curriculum design as a result of participation in ABC workshops. One had seen 'a shift to a more student-centred approach'. Another had observed participants coming to the realisation that 'all the acquisition was happening in the same way' which triggered the introduction of a variety of learning activities. They concluded that ABC 'enhances in just so many different ways for different programmes and different groups, whatever's right for them.' Strongest of all was the impact on a master's course with 'very low numbers'. The decision was made to move the course online and 'they used the ABC as the design vehicle, and that's seen a tremendous impact, it's enhanced the programme enough that it's made it so much more attractive and accessible to people, that the numbers have quadrupled'.

On impact of any changes or innovations on the student experience and student outcomes, 'we need the courses to run a little bit longer to see actually what impact [ABC] has had'. It was recognised 'there's so many variables – who's teaching, and you know where it was running and whether the assessment changed from one year to another, and whether one student got a bad score which brought down the whole NSS ...'. Developers were nevertheless definite that in their view ABC workshops had contributed to a more positive student experience and better student outcomes. One commented:

'... we've moved from more passive to active learning, there are definitely more opportunities in the design that we've seen going from surface to deeper learning. So the design is enhanced to enable a richer learning experience'.

There was also a perception that student engagement had increased: 'we've had very positive feedback about student engagement ... student engagement has been cited a number of times'.

Conclusions and recommendations

Action for curriculum enhancement is more likely to be successful if the activities staff undertake to develop professionally cohere clearly with institutional goals. Staff are often under pressure with multiple demands on their time. Initiatives which appear unrelated to strategic aims may lead to innovation fatigue and may not be sustainable. At UCL, the Connected Curriculum is a core element of institutional strategy. UK educational developers were similarly influenced by institutional strategies; these acting as an incentive to run ABC workshops. Examples were curricular review, the development of online learning and student employability.

The hands-on team-based format of the ABC workshops is motivating and enjoyable in itself and there is evidence of engagement and staff learning as a result. The problem at UCL lies in the lack of follow-up support so participants may not implement the plans they have made during workshops. UK educational developers overcame this by integrating ABC workshops into a network of module development support.

Determining direct impact on the student experience is challenging before students had completed the relevant modules, but there was a sense that the range of learning activities foregrounded through the hands-on ABC module design process had a positive effect on student learning. Strong evidence of the impact of action for curriculum enhancement was also supplied by the UK educational developers. They had adapted the ABC resources to harmonise with institutional strategies and had achieved successful outcomes as a result.

The recommendations arising from the evaluation are as follows,

Recommendations

1. Involve staff in creative workshop activities and prioritise group discussion
2. Ensure sessions are timely and prepare participants for sessions
3. Follow up sessions
4. Integrate curriculum enhancement with institutional strategies.

References

- Arthur, M. (2014). From research-led to research-based teaching. *Research Professional*, 30 April 2014. Available online:
http://www.researchresearch.com/index.php?option=com_news&template=rr_2col&view=article&articleId=1343435 Accessed 28 January 2016.
- Beetham, H. & Sharpe, R. (2007) Rethinking pedagogy for a digital age: designing and delivering e-learning. London. Routledge Falmer
- Beetham, H. (2014) Institutional approaches to curriculum design: Final synthesis report. JISC Curriculum design programme. Available online:
http://repository.jisc.ac.uk/6002/1/JISC_Curriculum_Design_Final_Synthesis_i1.pdf
Accessed 28 January 2016.
- Ellis, R. & Goodyear, P. (2009). Students' experiences of elearning in higher education: the ecology of sustainable innovation. London: Routledge Falmer.
- Fung, D. (2014). Connected Curriculum: Transforming education at University College London. *UCL Academic Committee paper. 3 July*. Available online:
<http://www.ucl.ac.uk/teaching-learning/connected-curriculum/resources>. Accessed 28 January 2016.
- Goldstein, S. (2015). Perceptions of the SCONUL seven pillars of information literacy: A brief review. SCONUL. Available online:
<http://www.sconul.ac.uk/sites/default/files/documents/Seven%20Pillars%20Review%202015.pdf> Accessed 28 January 2016.
- HEFCE (2016a). National Student Survey. Available online: <http://www.hefce.ac.uk/lt/nss/>
Accessed 28 January 2016.
- HEFCE (2016b). Catalyst Fund <http://www.hefce.ac.uk/funding/catalyst> Archived.
- JISC (2012). Curriculum design programme. Available online:
<https://www.jisc.ac.uk/rd/projects/curriculum-design> Accessed 28 January 2016.
- Laurillard, D. (2012). *Teaching as a Design Science: Building Pedagogical Patterns for Learning and Technology*. New York and London: Routledge.
- Nicol, D. (2012). Transformational change in teaching and learning: Recasting the educational discourse (Viewpoints evaluation report). Available online:
http://wiki.ulster.ac.uk/download/attachments/23200594/Viewpoints_Evaluation_Report.pdf Accessed 28 January 2016.

Perovic, N. & Young, C. ABC Curriculum Design 2015 Summary (2015, December 2). Message posted to <http://blogs.ucl.ac.uk/digital-education/2015/12/02/abc-curriculum-design-2015-summary/>

Perovic, N. & Young, C. ABC Curriculum Design Workshops (2015, September 30). Message posted to <http://blogs.ucl.ac.uk/digital-education/2015/09/30/9169/>

Perovic, N. & Young, C. (2015, April 9). ABC (Arena Blended Connected) curriculum design. Message posted to <http://blogs.ucl.ac.uk/digital-education/2015/04/09/abc-arena-blended-connected-curriculum-design/>

REAP (2010). Re-engineering Assessment Practices project. University of Strathclyde, Glasgow. Available online: <http://www.reap.ac.uk/> Accessed 28 January 2016.

SCONUL (1999). Seven pillars of information literacy. Available online: <http://www.sconul.ac.uk/tags/7-pillars> Accessed 28 January 2016.

Salmon, G. and Wright, P. (2014) Transforming future teaching through 'Carpe Diem' learning design. *Educ. Sci.* 2014, 4, 52-63.

UCL (2015). UCL 2034 Strategy. Available online: <http://www.ucl.ac.uk/ucl-2034> Accessed 28 January 2016.

University of Ulster (2012). Curriculum design workshop resources. Available online: <http://wiki.ulster.ac.uk/display/VPR/Home> Accessed 28 January 2016.