

Collaborative and Participatory Learning: The co_LAB Model.

Richard Vickers
University of Lincoln
Lincoln School of Film & Media
Lincoln, UK
+44 1522 886377
rvickers@lincoln.ac.uk

James Field
University of Lincoln
Lincoln School of Film & Media
Lincoln, UK
+44 1522 886377
jfield@lincoln.ac.uk

Martyn Thayne
University of Lincoln
Lincoln School of Film & Media
Lincoln, UK
+44 1522 886377
mthayne@lincoln.ac.uk

ABSTRACT

co_LAB is the Collaboration Laboratory, an interdisciplinary research network initiated by colleagues from the University of Lincoln School of Film and Media, to explore new approaches to teaching and learning through the use of networked digital tools, and through the transferral of knowledge, skillsets and teaching styles. The aim is to develop interdisciplinary and collaborative methods for innovation and social entrepreneurship, resulting in a variety of institutional and community impacts. In addition to undertaking a variety of practice-based research projects across the University and local community, co_LAB has developed a substantial European network of partner universities, departments and practitioners.

This network has resulted in collaboration on externally-funded projects and international strategic alliances to enable the sharing of pedagogical practice, and to enhance student mobility. The co_LAB team is currently half-way through *OnCreate* - a 3-year EU Erasmus funded project featuring a European consortium of 10 universities. The co_LAB model is designed to break down classroom walls and departmental divisions by encouraging community-based learning and sharing between students and colleagues from different academic disciplines. This model is underpinned by the principles of the University of Lincoln's Student-as-Producer concept. The model employs a blend of structured activities and discovery-based learning methods, with much of the workshops left open for students to develop concepts, lead sessions, present ideas and receive feedback from lecturers and other participants.

CCS Concepts

Education
Interactive learning environments
Collaborative learning

Keywords

collaborative learning; blended learning; interdisciplinary; trans-media, networked.

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1. INTRODUCTION

The co_LAB model is designed to break down classroom walls and departmental divisions by encouraging community-based learning and sharing between students and colleagues from different academic disciplines. We encourage student-directed learning wherever possible, with students collaborating on interdisciplinary research in small groups. The model employs a blend of structured activities and discovery-based learning methods, with much of the workshops left open for students to develop concepts, lead sessions, present ideas and receive feedback from lecturers and other participants. This model encourages an active and critical response to research and the production of new knowledge across all levels, including post-graduate. The catalyst for establishing co_LAB at the University of Lincoln was the innovative project 2013 'Media Culture 2020', that academics and students from the University of Lincoln took part in. Media Culture 2020 brought together academics and students from five European universities to develop new practices in learning, taking full advantage of social media and cloud-based technologies.

The main objective of the project was to break down classroom and campus walls by creating open virtual learning environments where students from different countries and fields could explore and learn together. Media Culture 2020 developed innovative digital learning environments that consider new forms of production, transmission and representation of knowledge. The project utilized a range of online platforms, social media and cloud-based technologies in the collaborative development, management and delivery of the project. For the students and lecturers from the 5 partner institutions taking part in Media Culture 2020, social media platforms offered an innovative solution to learning and teaching in a collaborative manner. Building on the success of the Media Culture 2020 project, in 2014 academics from the University of Lincoln established co_LAB to explore opportunities to embed some of the best practices at the institution.

co_LAB is an interdisciplinary, educational project aiming to overcome the traditional barriers between individual course specialisms by bringing together students and colleagues from across different academic disciplines to collaborate on a transmedia design project. The project was motivated by a desire to enhance collaboration and knowledge transfer between different courses within the College of Arts, the other colleges within the University, and outside partners including European academics and students. The project set out to investigate how collaborative and interdisciplinary methods of teaching and learning might engage students from a variety of educational contexts in the production, transmission and representation of new

knowledge. co_LAB intends to further develop the objectives of the Student as Producer project.

2. STUDENT AS PRODUCER

Conventional models of higher education have seen a schism develop between the two most fundamental activities which take place in universities: teaching and research. At the University of Lincoln, these two activities are not viewed as competing priorities but as integral components of a broader process, which is the real essence of a university: the creation of knowledge and meaning. The core concept of the Student as Producer project, led by the Educational Development and Enhancement Unit (EDEU) at the University of Lincoln, is research-engaged teaching. This means encouraging students at all levels and across all disciplines to see themselves as active producers of knowledge, rather than passive consumers. The principle of research-engaged teaching now underpins the curriculum across all subject areas at the University of Lincoln.

The project emphasises the role of students as collaborators. Undergraduates are given opportunities to work with academics, postgraduates and support staff on real academic research. In this way students become part of the academic project of the University and make a meaningful contribution to the production of knowledge alongside experienced researchers. Through practice and primary engagement with research, students extend and improve their practical and academic skills, which in turn increases their employment prospects and opportunities to pursue further study. The central tenets of Student as Producer were created as part of the Higher Education Academy (HEA) funded project that came to end in 2013. Student as Producer restates the meaning and purpose of higher education by reconnecting the core activities of universities, i.e., research and teaching, in a way that consolidates and substantiates the values of academic life. The core values of academic life are reflected in the quality of students that the University of Lincoln aims to produce. Student as Producer emphasises the role of the student as collaborators in the production of knowledge.

Student as Producer is a development of the University of Lincoln's policy of research-informed teaching to research-engaged teaching. Research-engaged teaching involves more research and research-like activities at the core of the undergraduate curriculum. Student as Producer is how students at the University of Lincoln are engaged with, and have ownership over, the production of their own educational experience. The main tenets are discovery-mode learning, underpinned by theory, and the engagement of students in research.

Student as Producer is central to the learning and teaching philosophy at the University of Lincoln, and is embedded within the Teaching and Learning Plan and in all module planning. It is fundamental to everything we do at the University of Lincoln, and is one of the key selling points to potential students. Features of Student as Producer;

- Assessment
- Citizenship
- Employability
- Pedagogy/curriculum
- Resources
- Skills

- Space
- Technology

Contexts of Student as Producer

- Student as Producer within the University
- Student as Producer of the University and of the curriculum
- Student as Producer beyond the University

3. CO_LAB

Much of co_LAB's work within the University is designed to embed 21st century skills and competencies through intensive projects that have social and cultural capital. The co_LAB model encourages community-based learning and sharing between students and colleagues from different academic disciplines, underpinned by the principles of Student-as-Producer. We encourage student-directed learning wherever possible, with students collaborating on interdisciplinary research in small groups. The model employs a blend of structured activities and discovery-based learning methods, with much of the workshops left open for students to develop concepts, lead sessions, present ideas and receive feedback from lecturers and other participants. This model encourages an active and critical response to research and the production of new knowledge across all levels, including post-graduate.

The co_LAB framework represents a novel form of 'blended learning', which Curtis Bonk and Charles Graham (2006: 5) define as a hybrid learning system that combines face-to-face instruction with computer mediated activities. Christopher McMorran (2013) suggests that if used in an educational setting, collaborative technology can enhance active participation (through content creation), increase student engagement, and enrich the learning process. The development of online learning environments alongside established classroom forms must therefore be considered a useful pedagogical approach, since it can serve to facilitate a more collaborative learning experience (Garrison & Kanuka 2004: 95-105; Berger & Trexler 200). Collaborative technologies were central to much of the work undertaken throughout this project, thus providing an opportunity to evaluate the educational merits of some of these tools.

In addition to the intensive workshop, cloud-based and social media tools were used to extend the methods of teaching and learning within an open, virtual learning environment. This mode of 'blended learning' was designed to enhance the learning experiences of a diverse set of students from different disciplinary contexts. Google+ and associated applications (Google Docs, Google Drive and Google Hangout) were implemented as the core tools for this process. Google Docs was utilized due to the range of integrated software needs it fulfills (word processing, spreadsheets, presentations, etc.). This platform enabled all participants to easily create and share documents from within the web browser, which could be accessed by a range of networked devices.

The associated 'cloud' storage service, Google Drive, allowed these documents to be shared to all participants instantaneously, whilst also facilitating a separate space for admin purposes. Throughout the project student groups each had their own folders for sharing work in progress, which the lecturers could also see and comment on if required. Google Hangouts was also used to facilitate the delivery of an online lecture by Chris Heydra from

The Hague University of Applied Science (which was streamed live and recorded to YouTube).

The outline of the workshop itself was not tied down to any formal structure, but instead open to negotiation and democratic voting process wherever possible via number of virtual ‘polls’ held on the Facebook group (which acted as an informal ‘coffee room’ to network and discuss ideas). Students were also invited to contribute to a shared Google Doc with any requests for additional content they felt they needed to support their concepts. One of the most popular requests was for more information about application development and design. In response to this, Lincoln School of Media lecturer James Field presented a case study of an application he has recently designed, and gave some invaluable advice about the importance of market research for developing creative design concepts.

In the past 3 years co_LAB has undertaken a number of extra-curricular workshops that have brought together people from different academic fields and contexts to collaborate on innovative trans-media projects that critically and creatively address contemporary societal themes and technological cultures (eg. Drones; the Web We Want project – in association with the Southbank Centre and Frequency; contemporary understandings of Magna Carta, Surveillance Culture and Big Data; the future of the academic book, etc.).

4. BOOK TO THE FUTURE (THE ACADEMIC BOOK OF THE FUTURE)

Building on the blended-learning model of cross-college collaboration developed in previous co_LAB projects, we ran an intensive, interdisciplinary workshop bringing together students from across the University of Lincoln to explore the Academic Book of the Future. The students considered the possibilities for the production and dissemination of academic knowledge in the context of the digital age, aiming to challenge, expand current perceptions and lay the groundwork for a wider view of what might be an acceptable and appropriate format for the ‘book’ in the 21st Century. Using the core research questions of the AHRC-funded Academic Book of the Future project as the focus for the workshop, *Book to the Future* encouraged students to engage with, explore and challenge a number of related issues including:

- The purposes that different kinds of academic books are thought to fulfil
- The ways researchers and publishers create academic books
- The forms that books take in the world of digital media and open-access publishing
- The spaces, physical and digital, in which academic books are found
- The accessibility, usability, functionality of academic books
- The impact of academic books
- The ways value judgements are made about academic books and the research they contain
- The significance of the monograph for REF purposes (2026 and beyond)

The project featured a one-week workshop that students from across the university collaborated on creative responses to these key research questions.

This latest workshop took place in May 2016 and began with a discussion of the co_LAB ethos, highlighting the interdisciplinary nature of the workshop (with participants from performing arts, games computing, computer science, media production and psychology). The group discussed the contention that education requires a radically new paradigm, with creativity and divergent thinking representing key skills for the 21st century. This thinking resonates strongly with the principles of Student as Producer, of which co_LAB is a staunch advocate. The co_LAB workshop model engages learners in what might be considered a ‘community of practice’. Throughout the project students and staff from different academic contexts and backgrounds worked in partnership, learning through discovery together to produce new knowledge and creative responses to the brief.

To introduce an element of creative problem solving (and to act as an icebreaker, since none of the participants had previously worked together), co_LAB ran the #Twitter_Bricks exercise developed in last year’s workshop. This activity involved splitting the participants (a mix of students and staff) into 3 teams to work together to recreate the co_LAB logo in Lego. They were assigned a third of the logo but instead of just recreating it flat, each group had to turn their “node” into a tower and their “connections” into a span. The 3 segments would then have to join together. Sound easy? Well if all 3 teams were to work together in the same room then yes, it probably would be very easy. However, here’s the twist... the 3 groups were separated by being in different rooms and so therefore unable to directly communicate. This meant that we had to develop novel methods for communicating dimensions in order to overcome this problem. In the pre-workshop phase participants were tasked with contributing to a Google Doc, which was designed to get the students collaborating and to encourage them to respond critically to the following three questions:

- How do you learn best?
- What supports or hinders your learning?
- How do you engage with reading and research in the 21st Century?

As a follow up to this activity individual learning experiences were discussed, which resulted in some emerging common themes: learning best through the practical application of knowledge, through engagement with a variety of audiovisual content, and via social networks. To contextualize this trend ‘Connectivism’ was discussed, which George Siemens (2004) describes as a ‘learning theory for the digital age’. This framework views learning as a process that occurs within nebulous social, cultural and technological environments, emphasizing the networked nature of learning. Connectivism is useful for understanding how to successfully facilitate learning in the 21st century as it underscores the significance of interacting with other learners, providing value across networks and communities by contributing to the sharing and co-creation of knowledge.

The brief was introduced to participants, which was to respond creatively to the key research questions of the AHRC (Arts and Humanities Research Council) funded Academic Book of the Future project. This involves some speculation about the roles and forms that the ‘book’ may embody in the future. To further support our creative endeavors we explored the Design

Thinking model. According to this model, empathizing with the end user/audience is a crucial starting point for all good design. In order to help further define the issues that need to be addressed in the ideation phase, ideas were generated about the purpose of academic books.

Dr. Sarah Barrow, who is on the Advisory Panel for The Academic Book of the Future, provided some context for the key aims and objectives of the the broader AHRC-funded research project. The Academic Book of the Future is currently in its second phase of a two-year cycle, focused on facilitating conversations with and between all stakeholders of the academic book (including academics, publishers, librarians, booksellers and policy-makers). As part of this process, support has been given to institutions from across the UK to interrogate current and emerging issues around the academic book and its contexts.

Then potential 'forms' that the book of the future might take were explored. To support this process, the group returned to a suggestion made by Dr. Duncan Rowland, a participant from the School of Computer Science. Duncan proposed that the book is a combination of two things – a container and its contents (i.e. Book = Container + Content). This presented an interesting way of defining the particular issues to be addressed in the ideation phase of the workshop by thinking about the academic book as a medium (container) for transmitting new knowledge (content). The focus then was on the potential multi-media/multi-platform/multi-sensory properties and functionalities that the book of the future might embody.

The next stage began with a 'brainwriting' exercise that encouraged the participants to address the requirements and experiences of key stakeholders in the academic book of the future. This involved spending some time (in silence) writing individual ideas for each stakeholder on post-it notes. The benefit this approach had over more traditional verbal 'brainstorming' was that all ideas were given equal footing (avoiding a scenario where the ideas of quieter or more reserved individuals are 'drowned out'), and it soon became clear when certain ideas had particular prominence within the group. After these ideas were pooled together and categorized (Academics/Learners, Authors, Librarians, Publishers, Booksellers, and Policy-makers), each category was collaboratively organized into 'clusters' of similar themes or issues. This helped refine the understanding of the various users/audiences being designed for.

Before the ideation phase of the project began, it was important to define the key issues that need to be considered when designing and developing the creative responses to the brief. To support this process a facilitated discussion took place on an article posted to the co_LAB Facebook group by one of the participants. The article (an interview with panel members from last year's FutureBook conference) presented specialist insight about key digital challenges facing the book industry – which led to a focus on a particular a suggestion made by Samantha Rayner (University College London): "As consumers of books become more connected via a global online network of readers and texts, the digital realm will continue to develop as a key context for "the three Ds": Dissemination, Discoverability and Discussion. But the digital future does not just mean e-books. "The three D" environment also holds huge creative opportunities for supporting new print books, too." This turned into a break out activity where the group split into three teams to discuss the the core values, features and functionality the book of the future should embody in relation to these 'three D's'. The group explored the creative potential of a range of existing mixed reality technologies, with

participant Stephen Fisher demonstrating the triggering of augmented reality overlays, fully immersive virtual reality environments, and switching between VR and AR using the Samsung Gear VR. This was followed by assessing similar concepts and examples of speculative design in order to provide inspiration for the design concepts.

For the next stage the group fully immersed themselves in the ideation process by formalizing an initial concept and discussing how best visualize the ideas. The central concept expands on the conclusions – not to replace the book in its current form(s), but rather to develop some kind of system for augmenting the book. The idea being that this system/architecture would connect many 'containers' of knowledge (print books, eReaders, journals, etc.) and enable different devices and applications to be integrated in order to deliver a whole raft of multiplatform/multimedia/multisensory features that can support learning, engagement and comprehension. Our research and discussions throughout the workshop have suggested a range of core functionalities and requirements for academics in the 21st century:

- Social/communal – allowing users to discuss, analyze, critique and exchange related/supporting/contrary research
- Personalized and customizable learning experience
- Providing information about the impact, citations and relevance of the book (and its contents)
- Providing key-words, overviews and additional information about the content, authors, suggested readings
- Ability to tag, categorize, archive
- Suggest and augment books with additional related audio-visual content
- Support learning difficulties and learning styles

In addition to this central concept (an integrated learning ecosystem), the group brainstormed the various applications and interactive surfaces/screens that could connect to this system. One of these is a development of the IKEA interactive kitchen table and IDEO Future Book concepts. Whilst these concepts are fairly confined to one device, the workshop participants were interested in the ways in which different devices can be integrated together to enhance and augment the learner experience. The core concept developed throughout the workshop was 'Scholr', an integrated learning system that aims to support and enhance the academic experience. Scholr is a networked platform that connects existing digitised databases of books, audiovisual content and open data sets; provides a community/social experience where readers can also be producers of new knowledge and academic debate; and allows new applications to be developed across a variety of technologies. The principles of 'collective intelligence' and open/big data would result in more refined, reliable and relevant augmented content, whilst the development of applications could be opened up to the community through plugins and developer kits.

The Scholr learning system can be accessed and modified on a number of devices, providing additional experiences that can be further enhanced when using the interactive table. Importantly, we are not looking to replace traditional print or existing eBooks. Scholr aims to augment the learning experience, improve modes of comprehension, facilitate intellectual discussion between communities of learners, and make academic knowledge more

inclusive and accessible. It is imagined that libraries and classrooms of the future could use this technology to foster a more collaborative culture of knowledge exchange and critical debate about books. Scholr represents a number of potential benefits for each stakeholder in the academic book of the future.

To provide a professional research context for the work undertaken by participants, an exhibition of the student outputs will coincide with the ‘Cybernetic Subjectivities and the Mediation of Trust and Empathy’ symposium, which is being hosted by the Lincoln School of Film and Media at the end of May. This event will be the inaugural founding event marking the establishment of the Centre for Entangled Media Research. The aim is to provide an opportunity for students to receive feedback on their concepts and prototypes from an international delegate of scholars.

Depending on the direction student participants develop in terms of their responses to the brief, there is also an opportunity to develop design prototypes to be entered under the ‘Smart Learning’ category of the *European Youth Award 2016*. The European Youth Award is a pan-European contest to motivate young people, social entrepreneurs and start-ups to produce innovative digital projects with impact on society. The aim of the EYA is to encourage young people from across Europe to collaborate and engage as active citizens by creating innovative technological solutions that address the goals defined by the Council of Europe and Europe 2020. The competition seeks the most creative digital projects (websites, apps, wearable devices, smart-tech, digital installations, etc.) that directly address Europe’s most pressing matters. The Smart Learning category is appropriate for projects that are focused on developing new, creative approaches to education and learning (education, e-skills, open science, etc.). If students do show an interest in developing their concepts for submission to this competition, the co LAB team will liaise with them to finalize their submissions and complete the required paperwork in time for the deadline in July.

5. BRANDING DESIGN WORKSHOP

At the start of 2015, we, along with other members of the OnCreate consortium, co-created a blended learning course on the subject of branding design with the intention of offering access to students across all partner institutions. The course was devised in such a way that it was to be as a collaboration between students from different institutions. They would be provided with all the learning material via an online learning platform (in this instance Eliademy) but this would be blended with scheduled online live workshop/meetings hosted by partners responsible for creating the course materials.

Secondly, the school to which we belong had recently been granted permission to create their own sub-branding to gain a certain amount of autonomy. This reflects current trends within educational institutions to highlight a particular area of importance or to encourage growth and improve reputation. As a research group also known for producing and facilitating well-designed artefacts, we were approached to design this new branding. We thought however, this should be an opportunity that is presented to students, utilizing the learning materials developed for the branding design workshop.

We know that at least one other partner institution from the OnCreate consortium were planning on running something in the domain of branding design with their students so we decided this was an opportunity to try and engage the students with collaborative production.

We have learnt from previous attempts with remote location-based collaboration that it’s important to set the scope of what realistic exceptions are achievable. Based-on the fact our collaborations are only ever extra-curricular (as to include everyone at module level would be logistically difficult due to the number of students we have), we decided to opt for the minimum expectation of collaborative peer review and feedback. This way, teams of students could work autonomously but get together at various instances to present ideas, developments and final work.

Another issue that arises from us only ever been able to commit to these projects as extra-curricular ventures is that the time we can commit to them is always very short or compact. In this instance we only really had the opportunity to “connect” our classrooms once.

5.1 Connecting The Classrooms

The plan to connect the classrooms was to use Adobe Connect – the platform used by the consortium for OnCreate meetings – to bring all participants (or groups) together in a “meeting room” and then divide them out into “breakout groups” for feedback sessions.

In theory this is a good system and prior to this we had some success with the Adobe Connect platform, however there were issues that hampered this experience and actually convinced us that the platform is actually quite poor, especially in conjunction with the way we managed and envisioned it would work.

Firstly, the technology is relatively outdated. It is still powered by Flash – which, when it comes to video, isn’t necessarily the worst option as although Flash as a web-based platform is now obsolete, Flash video is still quite prevalent and the choice of many video streaming services. However, the quality of the experience is directly proportional to the capability of both the server and bandwidth of all connected clients. If one or more of these components is weak then the experience for all tends to diminish.

There was an additional logistical problem, that wasn’t the fault of the technology but still a consideration, in that we (Lincoln students) were all in the same room and the EU students were either at home meaning that they had access to headsets, and we didn’t. Even if we did, it would have been socially inappropriate to don headsets whilst a room full of other collaborators.

Perhaps the largest issue however was the apparent lack of planning brought about by a mixture of slightly misaligned expectations, poor communication and the inability of the technology to deliver an effective transition from modes (from open meeting to breakout groups). After this pilot we concluded that in order for future online classroom connections to run efficiently, the facilitators of said sessions must present an agenda ahead of the actual meeting. Unlike meeting in person where the agenda can be circulated at the time of the meeting, the nature of the collaborative practice undertaken in these sessions requires that participants be forearmed with potential questions or feedback ready to take full advantage of the reduced ability to communicate via this combination of technology and activity.

There were some positives which clearly demonstrate that once an ideal platform has been selected (or the existing one improved), that there is potential for online connected classroom activities to play a very useful role in both extracurricular and general curriculum activities. For instance, when the text-based communication was utilized by both parties then actual feedback and suggestions for improvement did take place. Most notably

however, the functionality of the real-time drawing board did allow those who discovered it to actually “sketch” ideas out as opposed to describing them. This obviously rendered any language barrier null and void. If Adobe Connect had the ability to sketch in real-time over existing files (like PDF or PNG), then feedback could have been directed to the location of the issues or point of comment. It may well have this feature but it wasn’t immediately accessible or intuitive to new users.

5.2 Digital Platforms

As part of this workshop, students were introduced to two digital platforms. Firstly, the course was hosted on Eliademy because online learning management platforms tend to be closed to visitors outside of the owning institution. As this was a collaboration between different institutions we therefore turned to Eliademy because it is free and anyone can create an online course with whatever structure they deem appropriate.

Whilst Eliademy is wonderfully simple and accessible, it doesn’t have the same power to encourage participants to become engaged with the topic at hand. Partly because of the open way a course is structured. There are no measures for establishing monitored progression either from the participant or the teacher. There is formal assessment but no indication that the way you are structuring your ‘classes’ or learning materials is working and that students are looking at them. Maybe there are more features in the paid version but we have yet to explore this. Basically, the course is only as good the owner has arranged it. Whilst Eliademy has tried to accommodate as many course structures as possible (by leaving you to it), I think this works against it when compared to other examples we’ve encountered that offer highly structured and trackable content management. That aside, for a simple 4 week course, Eliademy performed quite well.

The other platform we explored allowed students to perform multiple aspects of both synchronous and asynchronous collaboration. Padlet is simply a shared space where collaborators can attach images, videos and web links in any arrangement they see fit. It has advantages over other pin board applications such as Pinterest in that there is no grid or structure to how content is positioned. This allows it to be re-purposed as a moodboard, scrapbook, presentation aid, research repository and many more. Students really enjoyed using Padlet with many of them now using it as the default collaboration space online.

Upon completion of the workshop participants were given a simple questionnaire, the questions and topic of which were drawn from the ongoing OnCreate project’s work on establishing an evaluatory feedback model testing creative collaborative experience. For this particular workshop, the following questions were used:

- General – Did you enjoy participating in the workshop?
- Tools – Did you find the course environment (technology) easy to Use? If not, what problems were there?
- Tools – Did the tools you used on the course environment support communication and working with others well?
- Teamwork – Was your team working, communicating and sharing tasks effectively? If not, what could have been better?
- Teamwork – Did you learn new team working skills? If so, what were they?

10 participants answered the questions and the results were consistent. All students answered Yes for the first 4 questions and commented on how useful they found the experience of using technology in order to support collaborative-based working. Some also commented that when the technology was working, the real-time connection to a studio in an international institution was a new and useful experience. All participants answered No the fifth question. Comments seem to suggest that the nature of their courses here in Lincoln have already set them up for working effectively as part of a team, and even though the technology provided them with a space in which to document their ideas, because they met in a physical space, they didn’t really get to see the benefits the tools could have when distance working. I guess this would have been different if they were working in international groups, but, as mentioned at the start of this post, this was going to be too logistically challenging.

This information will shape the way we approach the next iteration of this collaborative-working model when when we start working the The Hague University of Applied Sciences and participate on their Service Design module in the Spring of 2016.

CONCLUSION

The co_LAB model is designed to break down classroom walls and departmental divisions by encouraging community-based learning and sharing between students and colleagues from different academic disciplines. This model is underpinned by the principles of Student-as-Producer. Student-directed learning is encouraged wherever possible, with students collaborating on interdisciplinary research in small groups. The model employs a blend of structured activities and discovery-based learning methods, with much of the workshops left open for students to develop concepts, lead sessions, present ideas and receive feedback from lecturers and other participants. This model encourages an active and critical response to research and the production of new knowledge across all levels, including post-graduate.

The blend of both synchronous and asynchronous teaching methods fostered an open, blended learning environment, one which extended the traditional boundaries of the classroom in time and space. The interactive and decentralized nature of these digital tools enabled staff and students to communicate and strengthen social ties, alongside participation in the production of new knowledge and media content. For the students and lecturers, the implementation of social media and ‘cloud’ platforms offer an innovative solution to both teaching and learning in a collaborative manner. By leveraging the interactive and decentralised capabilities of a range of technologies in an educational context, this model of digital scholarship was shown to facilitate an open and dynamic working environment. The blended teaching methods piloted throughout allowed for expansive collaboration, whereby information and knowledge could be accessed and disseminated across a number of networked devices. It is clear that this model of collaborative pedagogy could be appropriated to extend the traditional boundaries of the classroom and encouraging a more participatory mode of learning.

In addition to running cross-college collaborative projects, the co_LAB team undertake a series of ‘Maker’ labs - shorter workshops and master-classes that focus on specific skills, practice-based approaches, or explorations of ‘leading edge’ technologies and software (color grading and motion graphics, digital matte-painting; branding and logo design; user-centered design; human-centered design for social enterprise; virtual and

augmented reality; mobile and web application development, etc.). These workshops act as a test-bed for new teaching and assessment methods, which are subsequently piloted and integrated at curriculum level.

Another site for experimentation with collaborative processes has been through participation in a series of 'International weeks' (iWeeks) at partner institutions across Europe. These iWeeks invite international artists and educators to deliver workshops that focus on innovative and creative teaching and learning. In November 2015, co_LAB hosted the LSFM's first IWeek, with participants from Lincoln Latvia and Netherlands collaborating on participatory community projects that were exhibited as part of the 'Fabratory' at Frequency Festival of Digital Culture.

The co_LAB team is committed to sharing its research-based practice with the wider academic community, collaborating on a number of papers, publications, conference items and best-practice presentations at a departmental, institutional and international level. co LAB also endeavors to showcase its practice work at local and international exhibitions, art fairs and culture festivals.

6. ONLINE RESOURCES

The co_LAB project blog is available here:

<http://colab.blogs.lincoln.ac.uk/>

The Academic book of the future:

<https://spark.adobe.com/page/uYSrs/>

co_LAB at the Web We Want Festival

<https://www.youtube.com/watch?v=hyLW7ogWIIE>

OnCreate Project:

<http://on-create.eu/>

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