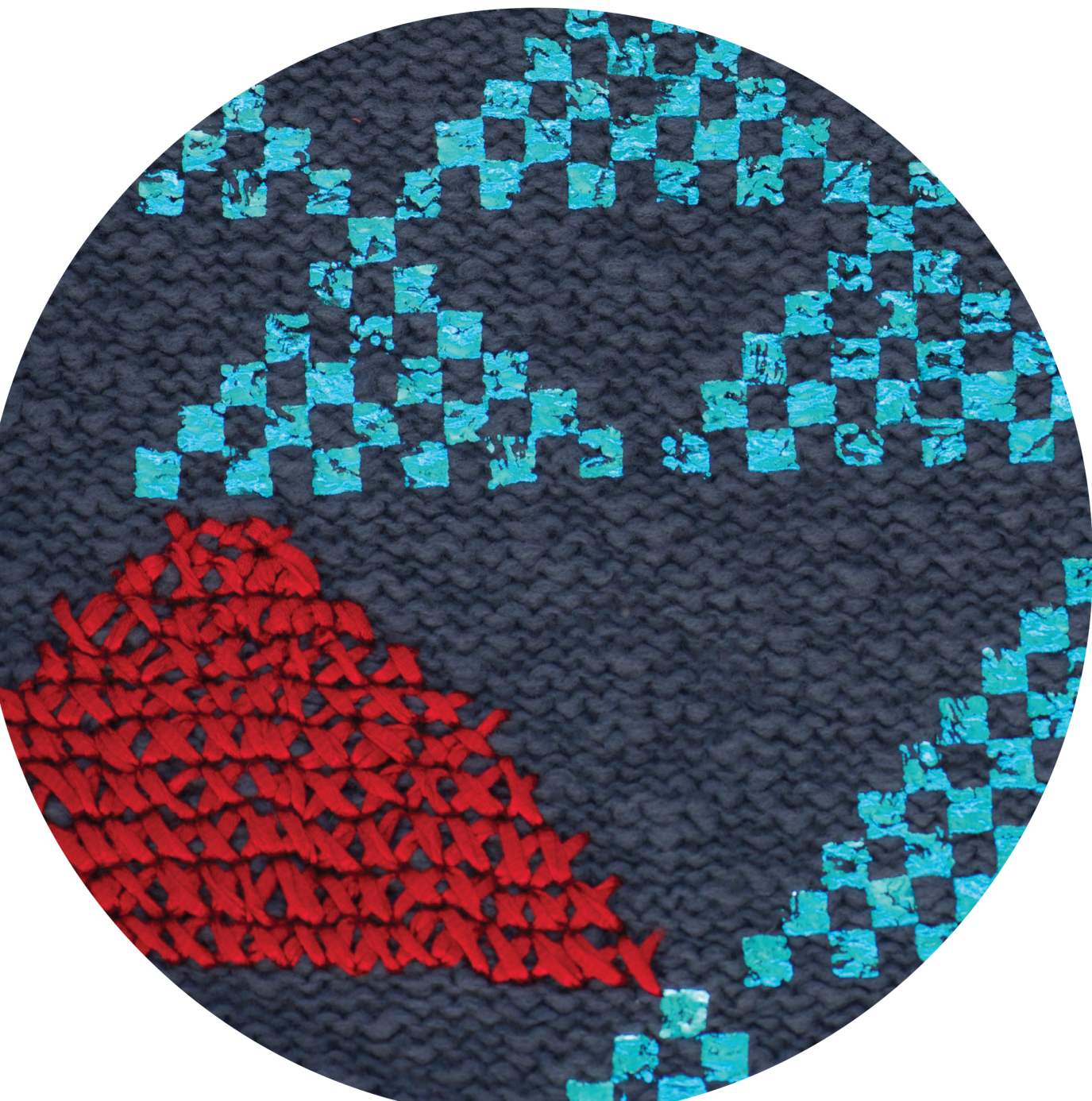
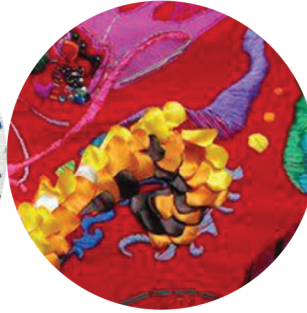


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COLLABORATIVE DESIGNERS: THE VALUE OF NURTURING TRULY COLLECTIVE VOICES

COLLABORATION | CO-OPERATION | EDUCATION | AUTHORSHIP | INTERDISCIPLINARITY



ABSTRACT

COLLABORATION IS A WIDELY USED BUZZ WORD LOOSELY INTERPRETED ACROSS THE EDUCATIONAL SECTOR AS WORKING TOGETHER. HOWEVER, THERE IS SOME CONFUSION BETWEEN COLLABORATION AND CO-OPERATION, THE LATTER DESCRIBING INDIVIDUALS WORKING ALONGSIDE ONE ANOTHER TOWARDS A SHARED GOAL, WHEREAS THE FORMER INCLUDES ALL PARTICIPANTS FULLY INTEGRATED AND SHARING TOGETHER IN THE DEVELOPMENT OF THE PROJECT TOWARDS THE SHARED GOAL.

Often fraught with tension and competition across departments, disciplines and even institutions this paper seeks to evangelise those cynical about the benefits of true collaboration, or those struggling to convince students that collaboration may be a positive way forward. Underpinned by case studies including an international textile project between China and Scotland, a multi-disciplinary event cultivating and nurturing a collaborative culture across 11 departments within a Scottish HEI, and an initiative bringing together glass, textiles and concrete, this paper seeks to identify what collaboration is, or can be. The focus on the learning experience of the participants rather than the product of the collaborative venture is retained throughout.

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Highlighting the benefits of true collaboration where fully integrated dual or multi authorship enhances collective development of projects and ideas, as opposed to a group of experts each responsible for their own component within a collective venture. Working side by side, collaboration is seen as a positive and necessary component for innovation. Identifying appropriate partnerships for successful collaboration at the outset appears to be essential and having sought out positive and mutually beneficial partners, cultivating these appears to be the key to the development and successful conclusions to projects. Healthy and mutually beneficial partnerships spawn from championing and celebrating the differences between individuals, massaging egos, and promoting mutual respect throughout the process through good communication between all parties. The paper seeks to demonstrate the lasting effects of a positive collaborative learning experience for our future designers. The lone genius is generally a myth; behind most great

inventors are huge teams of innovators. It is the friction and the chemistry of creative interfaces between several minds which usually provides the most innovative ideas, often through challenge. Apple continues to thrive without Steve Jobs who despite being a great visionary relied on his team and co-workers' expertise alongside his own. McQueen thrives without Lee, and the sooner our design students understand and recognise the benefits and relevance of nurturing healthy collaborative cultures and the roles and recognition of creative teams, the stronger our sector will become. Today's employers are seeking graduates with evidence of team work and collaborative experience. Universities are an ideal platform to provide the sheltered introduction to collaborative practice both within the institution, across institutions and between education and industry. This suite of case studies demonstrates the potential of encouraging both staff and students within the educational sector to embrace the possibilities of truly collaborative voices.



INTRODUCTION

'Collective voices' implies the bringing together of more than one person with something to say. This paper aims to promote enriched and relevant educational experiences through stimulating collaborative development between individuals as opposed to the gathering together of several individual contributions to create a whole.

Research Question: Can educational projects promoting the unified efforts of a number of individuals within the design process push innovation and provide more relevant experiences for today's learners, than the traditional approach of the individual educational path?

More than 15 years ago Ted Panitz was already clarifying the differences between groups working side by side towards an end goal, and those creating and working together towards an end goal.

"Collaboration is a philosophy of interaction and personal lifestyle, whereas cooperation is a structure of interaction designed to facilitate the accomplishment of an end product or goal."

Ted Panitz (1996)

If collaboration involves the working together of more than one individual to accomplish a goal with the focus rooted in the word process, can collective voices be interpreted as co-operative voices; these voices brought together as individual elements to create a whole, comparable to jigsaw pieces whose sum make up a picture? If this is the case could 'collective' imply that working together does not necessitate interaction whilst the endeavour unfolds? I am seeking to underline the importance and value of fully integrated collaboration where the interaction between individuals as the activity develops, is an imperative element within the collaborative process.

METHODOLOGY

Citing 3 different approaches to collaborative projects as case studies, each is critically analysed through the data generated from a range of feedback mechanisms, that is, semi-structured interviews, online surveys and group discussion sessions. Feedback is analysed and grouped to identify themes of experience and strands of evidence, which support theories or indeed uncover new theories of the learning and teaching within a collaborative setting. By citing the feedback directly generated from the students, the reader has first-hand accounts of their experiences rather than the sanitised interpretation of the academic. Compared and contrasted the outcomes of the analysis of each project support new models for the promotion of this theory.

WHAT IS THE VALUE OF COLLABORATIVE EXPERIENCES AS DESIGN STUDENTS... EDUCATIONALLY?

Historically design teaching has cultivated the lone voice, the individual designer and sole practitioner whose design education is a personal linear journey; the pinnacle being a showcase degree show or individual collection in the institution fashion show. Whilst collaborative initiatives now proliferate through the formative years of undergraduate design education, there still remains a resistance to students working together to the same ends in the final undergraduate year. This paper promotes the benefits of collaborative learning and collaborative doing, citing case studies:

- Reveal and Engage is a project embracing the 11 departments of Edinburgh College of Art's (ECA's) Design Department in a multi-disciplinary event encouraging the initiation of collaborative partnerships between individuals across disciplines.

- The British Council funded international initiative between Wuhan University (WUHAN) in China and ECA textiles department demonstrates cross cultural collaboration with textiles at its core.
- The third case study is an example of a cross disciplinary project with materiality as the central focus for glass, textiles and concrete, uniting undergraduate and postgraduate students and staff in creative clusters.

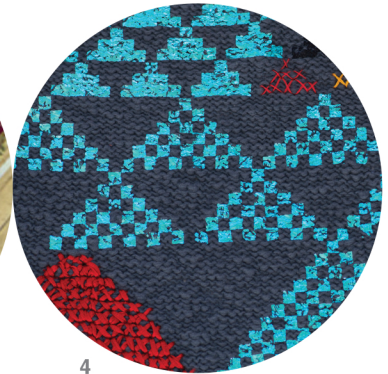
WHAT IS THE VALUE OF THIS LEARNING FOR OUR GRADUATES IN THE FUTURE?

Today's graduates face an increasingly challenging economy and job market where transferable skills and breadth of experience is essential. A first class honours degree is no longer sufficient proof of excellence. Together with creative individuality, design graduates are expected to have a proven track record in teamwork, entrepreneurial skills and business acumen, alongside evidencing their creative potential. 'Personal transferable skills' are expected on every C.V. and sought by employers (see Tate, 1993), along with evidence of problem-solving, communication skills, and especially for this study 'working effectively with others'. It is therefore necessary to embed this type of learning into our curricula in order to provide relevant key skills and experience for our graduates.

Today, networking has never been more instant. With social media sites and the flexibility and speed of the internet, making contact and seeking out appropriate people and services has never been swifter. However, this paper argues that although effective in many instances these single streamed interfaces lack the subtleties and richness of experience offered by face to face dialogue and interaction. Distinct creative benefits also arise through physical interaction of collaborators with materials and



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artefacts, as demonstrated in the study of students and staff working on the multi-disciplinary project. Set in the safe environs of a University, many connections forged become solid foundations for positive future projects, therefore facilitating and encouraging connections within this setting is advantageous.

When my evangelical crusade into promoting collaboration began a few years ago I approached my immediate boss to ask for a pulpit from which to recruit the department staff and students. His advice was straight.

'The reality of this industry is that it is competitive and cut throat. Your biggest problem is in changing mind sets and attitudes.'

Robert Gillan, Associate Head of Design, ECA, 2008

In the fashion and textiles industries top designers are seen to 'collaborate' with mass market stores offering a mutually beneficial arrangement for affordable fashion, for example, with Mary Katrantzou creating a range for Topshop, and Versace working with H+M. The designers are not 'dumbing down' but designing within different parameters. These positive symbiotic arrangements should be promoted to students.

CASE STUDY 1: REVEAL AND ENGAGE. SELF-SELECTING PARTNERSHIPS MADE THROUGH MUTUAL INTEREST

PROVIDING A PLATFORM AND NURTURING MEANINGFUL COLLABORATIVE PRACTICE FOR UNDERGRADUATE DESIGN STUDENTS

Networking is a recognised component which can be a major contribution to the success of any artist or designer. Despite being encouraged to work in teams and groups in earlier undergraduate years, most of our final year students invest their last year of University immersed in their major final projects, their focus and goals directed towards Graduate Fashion Week, New Designers, or similar landmark events. With this focused vision the importance of making connections outside the confines of their own knowledge, experience and understanding can become shockingly abruptly relevant on graduation. By encouraging collaborative experience in the safe confines of education, enticing students to invest in collaborative practice and build relevant networks, on graduation they hit the ground running. This project aims to expose all students, even the most resistant, to the benefits of reaching outside the confines of a singular vision and the limitations, in some cases of sole author status.

This initiative originally spawned from the realisation that our design students were tightly bound within their own disciplines with little awareness of activities of their peers' beyond their own cohort. While collaborative projects do exist, they tend to be discipline specific, and often projects with companies and organisations outside of the University. This event provides a stage and a catalyst to encourage peer interaction and dialogue across disciplines.

For one day in October individuals are given a 1.5 metre square space within a large gallery space (figure 1) in which to present their visions, ideas, and research interests.

Students are encouraged to show work in progress, short statements of intentions and research (figure 2).

Accompanied by business cards and website links, this profile helps enable students to identify others they may like to work with, develop ideas with or simply talk to. Students are actively encouraged to forge links, meet, and talk with one another. The preparation helps define their identity and their own skill sets. Consequently they are able to appreciate those of their peers and to acknowledge gaps and overlaps, championing common interests and celebrating diversities. This in itself is a useful exercise.

'Everyone had different ways of presenting their work and I think that makes sense, and it is good to see how people work when you consider a collaboration, what they have and what you have, and how that all works together.'

4th year ECA student

As the selection of prospective partnerships is based on the student's visual and practical profile and remains with the students themselves, the ownership and responsibility to make the most relevant links lies with them. In Essi Salonen's 'A designer's guide to collaboration' (www.designingcollaboration.com/), this arrangement is defined as 'open' as opposed to 'closed' in that the choices are made by the participants and not the management (staff). This has proved to be a key component in the development of truly collaborative projects. Shared interests and visions sustain partnerships as the students have chosen to work together rather than having a partnership imposed on them.

'I had never really realised how similar our interests were and was surprised how much she revealed of my own working method, appeal and interests.'

4th year ECA student

Followed up by supported staff tutorials with cross-disciplinary partners, staff help nurture continued collaborative development. Additionally this project facilitates the liberation of staff, allowing them to share their expertise beyond their own departments. For one morning these visual profiles for final year design, serve as focal points to initiate discussion and dialogue. The staff interact across disciplines challenging, questioning, and making connections outside their own area of expertise. The resulting conversations are informal, organic and creative without the constraints of assessment or formal feedback.

'The value of interacting with students across the disciplines is immeasurable. I learned so much of what is happening elsewhere and how different departments deliver different aspects of the courses. I think this is such a valuable project for all of us.'

Jonathan Gibbs, Programme Director Illustration ECA

Individuals have broadened their networks and generated links and partnerships serving them beyond the confines of ECA. Successful partnerships between disciplines, for example fashion (figure 3) and textiles (figure 4) which have developed into full collections.



RESISTANCE BY INDIVIDUALS TO PARTICIPATE: GOOD LEARNING CAN TASTE OF BAD MEDICINE.

For success, this project required the ‘buy-in’ of a broad range of disciplines and the richness of large student numbers.

There exists in many design students a final year syndrome. Those who have been open to collaborative and group projects in formative years freeze at the prospect of investing their precious last year on collaborative ventures. Some recognisable symptoms:

- Entirely unwilling to ‘share’ their final year collection with anyone;
- They genuinely feel they don’t have the time to work with other people;
- Once they have made a decision on their direction that any change is negative;
- It’s their one and only chance to prove themselves.

Asked in the survey what the student expected to get out of the Reveal and Engage experience, the following indicates a negative response:

‘Not an awful lot as I have no desire to collaborate with anyone and if I did I think that this is a rather odd way to go about it.’

4th year student ECA

The project was mandatory for all final year design students in our first year of running it, and even the resistant students benefited from having the bad medicine forced down:

‘I have learnt to give things a go even if I feel like they are a waste of time, they could be useful and exciting if you are open!’

4th year student ECA

With several iterations over the past four years we have amassed a wealth of feedback and have documented a range of vibrant successful collaborative projects which have resulted from Reveal and Engage (R and E). This has been gathered using a range of methods including:

- Feedback sessions with mixed staff and student groups
- Anonymous survey monkey questionnaires.
- Self-evaluation feedback through the eportal system
- One-to-one staff consultation

Student feedback demonstrates the value of the experience which genuinely appears to open students up to possibilities

I have found this to be the most challenging project so far, and yet also the most useful and with a lot of potential. The idea of collaboration with the design school has been very inspiring and as well as opening up new ideas, new possibilities and alternative sources are now more available to us. This is a good project as it is extremely beneficial both inside of college and for afterwards.’

4th year student ECA

‘I learnt that others had similar research themes to me and that I can negotiate collaborations without the help of tutors. I have also learnt that I like collaborations as it helps to put my work in context and I like to bounce off others ideas’

4th year student ECA

‘I enjoyed collating the parts of work to show, and I enjoyed seeing work everyone had done. The best contact I made was with a girl I know, but she has never seen my work before. She is in performance costume and we are going to work together on a project.’

Animation student ECA

Whilst collaboration is at the heart of this project the by-product for the students appears to be in the benefits of seeing what each other are working on. Questioned through an online survey about the project experience students were asked.

‘Please could you outline what you have gained from the R and E experience?’

1. Has it helped you organise your own direction?	29%
2. Exposed you to other ways of thinking or working?	75%
3. Enriched your own research through sharing?	26%
4. Helped you identify prospective collaborators?	49%

This demonstrates the percentage of students who answered YES to these questions.

As with many projects it is difficult to assess the relevance and benefits of this case study without focussing on the success or otherwise of the products of collaborative ventures or the success in linking students together towards collaborative practice. While only 49% of the participants reported success in identifying prospective collaborators, the broader benefits of the project lie elsewhere.

For the purpose of this research, focus should be placed on the positive benefits of fostering collaborative practice for future initiatives and the enriching rewards of investing time and energy in looking at, and discussing individual practice outside the confines of the discipline.

CASE STUDY 2: WUHAN/ECA INTERNATIONAL COLLABORATION DEMONSTRATING THE RICHNESS OF CROSS-CULTURAL EXCHANGE.

Generating a collaborative culture through jointly authored textiles between ECA, Scotland and Wuhan Textile University, China, this project has been selected for inclusion to emphasise the importance of process, over product, in learning and teaching, and to demonstrate the value of reflective review at the conclusion of collaborative projects.

This initiative was funded by The British Council to promote a cultural exchange within an educational setting. Based on a pedagogic theory that collaborative practice can be used effectively as a

means to learning through experience. This project aimed to expose both staff and students to a different culture through physical engagement and interaction within the unfolding designing and making of textile samples. Described as a multi-authored linear collaboration, in that the designs were developed by several individuals in a sequential format, the resulting conclusive samples being the product of several people across cultures. The unifying factor between the institutions and individuals involved in the project are the artefacts themselves.

Grounded in textile heritage and techniques from the home country of the originators, two initial groups of samples were created, one in China and one in Scotland. The Scottish students studied Paisley pattern and Ayrshire needlework (figure 7 and 8) both ironically with their true roots in India!

At the outset the participants were made aware that the pieces would subsequently be worked into by students at the other collaborating

institution and were encouraged to take this into account when initiating the textiles. The samples were subsequently exchanged to the partner institution along with sketchbooks, research and additional development material. On receipt of the Wuhan samples, the ECA students subtracted or added to them with print and stitch techniques before returning them to China. Similarly the Wuhan students worked with the Scottish samples. In this way the samples were developed through a series of iterations from one institution to the other. By working so closely with the textiles of another culture rather than simply viewing them, the individuals would, we believed, become more immersed, gaining a deeper understanding of concepts and techniques of that other culture through viewing them from a new perspective.

The sample in figure 9 sent from China has been altered (figure 10) through the removal of synthetic yellow and lilac applique pieces, gold braid and black PVC. Additions of wool appliqué and cotton embroidery have been used to enhance the tactile quality of the sample and alter the balance of the composition.

For successful collaboration, shared goals with clear parameters and expectation of participants are essential, along with good communication. The brief specified A3 format, using Communication as the theme with few other restrictions. It is impossible to avoid assumptions; however this project raised awareness of allowing assumptions to lead a project. We assumed that the samples from each institution would follow a specific format. We assumed that the cultural approaches of each institution would be easily understood and mirror or complement our own. In short, despite our best intentions we had already envisaged the format of the



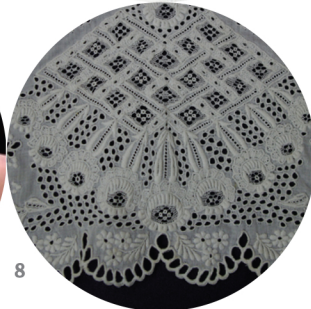
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output of our project before it truly began. In the textiles department at ECA we pride ourselves on promoting the value of the process in learning and teaching rather than focusing on the product/designs, yet in this project our initial expectation was to produce an exhibition of the textiles. The conclusion to this venture could not have been further from our expectations. Despite the visual and textural richness and the wonderful crossing of cultures in some of the final textile samples, the value in this project is undoubtedly seen in the reflective feedback from both the students and staff. We were able to reflect on our own approach to this project and the contrast in which the Wuhan partners approached the project, which was entirely different from our own expectations of them.

Kerry White an ECA student sent off her sample to China, asked for her comments on return of the sample (figure 11) after the first intervention, she writes:

'It is barely recognisable, there was a lot taken away from it. The delicate colour palette I originally had is now overcome with orange and black. Personally I don't like the black mesh. It is unpleasant to touch.'

Kerry White, ECA student

Hu Fan the Wuhan student working on Kerry's piece writes of her inspiration and research:

'The light coming through the darkness, hence the use of the black base fabric, the primary colours stimulating and connecting. I am communicating hope. By combining the inspiration from our 2 nations I wanted to create a dream

like appeal. The gauze like fabric helped in achieving this.'

Hu fan, Wuhan Textile University student

She goes on to explain her use of the gauze:

'This type of gauze fabric is used in much tailoring in China. I see this used on a chimney (a type of woman's garment).'

Hu Fan, Wuhan Textile University student

Kerry said, on reflection when asked what she had learned,

'That by looking beyond the reconstruction of my sample, and my initial dismay, there are lovely elements that should be appreciated.'

Kerry White, Edinburgh College of Art

Even in the feedback across cultures the differences in approach were stark. However, almost universally the ECA staff and students comments all alluded to the need to let go of the preciousness we attach to our creations. Asked what he had learned James Bruce responded:

'To be less precious of my work, especially such a project, where relinquishing ownership is at its heart.'

James Bruce, Edinburgh College of Art student

The aim of this project was to strengthen cross cultural links which is evidenced in much of the student exploration (figure 12), and to aid the participants understanding of each other's culture through the physical interaction of dual authored artefacts.

It could be argued that the experiences were co-operative; however the product of these experiences is collective. The samples themselves unite several voices, yet the conversation has been like that of a walky-talky with only one voice being heard at any given time, a series of interspersed monologues. While there is merit in this type of venture, in the context of this paper it cannot be described as truly collaborative.

There are many websites and initiatives cultivating what are presented as for example collaborative drawing sites e.g. flockdraw.com, drawitlive.com amongst a host of others, however, I would argue that these offer co-operative multi-authored collectives. This prompts the question, can collaboration be truly collaborative when the participants are working remotely from one another?

CASE STUDY 3: CONCRETE, GLASS AND TEXTILES

BREAKING BOUNDARIES ACROSS DISCIPLINES AND LEVELS OF EXPERTISE

The liberating effect of stepping outside the constraints of disciplines and the benefits of mixing expert and novice

Design education is traditionally delivered through specialist disciplines, often identified by material, technique and/or context. Students are aligned as specialists from the earliest stages in undergraduate education, which may be argued runs the risk of restricting creative vision. The following case study brought together three distinct disciplines, promoting collaborative practice spawned through the exploration of materials.

Surface, texture and light, exploited the creative synergy of staff and students from three diverse disciplines, architecture, textiles and glass, in a series of practical workshop sessions which were further developed in self-selected groups. In the past this type of project may have been organised by dividing specific responsibilities to subject specific groupings, the components and expertise all contributing to the sum. As suggested at the outset of the paper, this co-operative way of working may not always incite the most innovative approach to designing and making in teams. In fact assigning tasks co-operatively by specialism and experience may even prove to be counterproductive to innovation. Conversely to standard practice, this project did not align any responsibilities for design or technical development of any specific aspect of this project with the experts in any discipline.

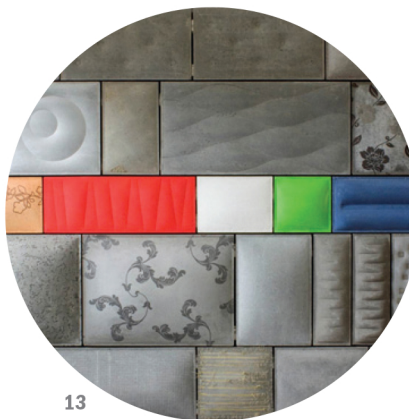
As an additional non-assessed project outside the curriculum, the intrinsic

motivation of participants contributed to the open approach to risk taking. The project began with a full group visit to an abandoned modernist seminary as a focus for inspiration (figure 14).

Mixed groupings of undergraduate, postgraduate students and staff then undertook a series of practical introductory workshops in each of the areas that is textiles, glass and fabric formed concrete. As no hierarchy existed across the groups there was equality right across the board from the outset, the glass lecturer with 35 years teaching and making experience was working alongside the 2nd year architecture undergraduate in learning and exploring the processes of textile screen-printing. This generated a dynamic mix of experience and approach within the workshop environment.

'It was a fully immersive and unbiased platform, which is vital for collaboration.'

Kirstine Binnie, undergraduate ECA glass student



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The introductory workshop sessions (figures 15 and 16) were followed up by large group discussion and feedback around the introductory experiences, which generated initial themes for development.

With the confidence of having experienced mixed groupings and grounding in each of the workshops the participants quickly organically self-selected into groups through shared interest. The groups gravitated to each other through materials, processes and in some cases personality. As evidenced in Case study 1, it appears that the strongest and most successful partnerships arise by handing control to the participants to select who they wish to work with.

In his inspired book, 'The Art of Innovation', based on the company IDEO, Tom Kelley (2001:75) presents his beliefs in non-hierarchical teams: 'We believe the strongest teams take route when individuals are given the chance of picking what groups they work with and even occasionally what projects they work on. That way passion fuels the fire'

The make-up of each group was remarkably balanced mix across all three disciplines with varied levels of experience which led to dynamic groupings and challenging ambitious ideas. In the past the relationship between lecturers/teachers and their students/pupils had been that of the expert teaching the learner. In 1973, Ashby described this as limiting and encouraged a more open approach which allowed the student greater encouragement to think outside the confines of knowledge 'passed down' to the student.

'The student moves from the uncritical acceptance of orthodoxy to creative dissent... [In higher education] there must be opportunities for the intellect to be stretched to its capacity, the critical faculty sharpened to the point at which it can change ideas.'

Ashby 1973:147

Whilst Ashby (1973) encourages the lecturer to let go of the reins so that the student has freedom to think outside the knowledge passed down, he does not go as far as to suggest that the lecturer should learn from the student. An expert is expected to be fully conversant with all processes, techniques, research and history of their own material or discipline. One of the most fascinating aspects of this project was when the non-expert challenged the expert, pushing them into often uncomfortable places; the textile staff member with no experience in concrete challenging the undergraduate architect's approach to structure and the undergraduate glass student challenging the restricted approach to printing techniques of the postgraduate textiles student. The novice, not being confined by perceived rules or conventions of a discipline or material, in contrast sees the possibilities of new materials and methods in relation to their own prior knowledge or experience perhaps relating to their own discipline. The joy of interdisciplinary teams is the wonderment and open approach of the novice akin to that of a child when introduced to a new materials and techniques. The 'why?' and the 'why not?' become the drivers of innovation. This mixed experience and interdisciplinary approach aided the opening up of potential in terms of challenging established norms and traditions which exist within disciplines.

'Collaboration, it means breaking boundaries. As soon as you allow yourself to be in an openly collaborative environment you are going to be breaking boundaries, you are going to be innovating. Whereas on your own, you may be breaking some boundaries within your own parameters but it's not as expansive.'

Tyler Chan, architecture, ECA

This concept transcends the educational arena and is relevant to innovation in industry. Karen Nicol, the highly successful embroiderer working with top couture fashion houses comments:

'It's so tricky. I love collaboration and I think it enhances both sides [that is fashion and textiles]. It makes the fashion designer do things they wouldn't have thought of and for me it makes me do things I wouldn't think of doing because they'll ask for things that are impossible which is great.'

Nicol 2013

This testing the boundaries and pushing innovation is also true in the relationship between education and industry. We invited Mark West, a world-renowned expert in fabric formed concrete to talk to, and work with the students and staff.

'Mark West said that when you become an expert it means you know everything there is to know about your material, your discipline. He has been working with fabric formwork for well over two decades yet he was so excited to see a group of people that have absolutely no idea about his material, his discipline and bring their own approach to it. In this case, he, the expert, was inspired by us. To have

someone as knowledgeable as Mark West to value our novice perspective really encouraged the groups to be confident in taking unconventional approaches.'

Izzy Bocchetti, textiles Artist in Residence, ECA

There can also exist, a liberating aspect to working collaboratively. By creating a culture which encourages the confidence in individuals to let go of control and truly work together without allowing hierarchy or difficulties in authorship to cloud the development, the creative potential can be fully ignited. This combination of openness and the challenge of the novice and co-creator hold interesting potential.

'The exciting thing about collaboration is that it's all about possibilities. It's [collaboration] suggestive that they can go further and I think that's really special, whereas sometimes when you look at something really refined you think it's the pinnacle, but working with others you are challenged to push it further again and again outside your own understanding.'

Tyler Chan, architecture postgraduate ECA

By looking beyond the limitations of understanding it can be easier to allow the less experienced to lead the experts. In Kidpad initiative, IT designers and educators worked collaboratively with children, allowing the children to lead design innovation and tools for learning (Druin et al 1997). The 'experts' looked to the children to challenge the design and creative approach to technology.



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BY CREATING A CULTURE WHICH ENCOURAGES THE CONFIDENCE IN INDIVIDUALS TO LET GO OF CONTROL AND TRULY WORK TOGETHER WITHOUT ALLOWING HIERARCHY OR DIFFICULTIES IN AUTHORSHIP TO CLOUD THE DEVELOPMENT, THE CREATIVE POTENTIAL CAN BE FULLY IGNITED.



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As with the international Wuhan collaboration, the fruits of the Concrete case study were in the process rather than the product. The resulting pieces told a story of materials, processes and the interaction between people, techniques, tools, glass, textiles and concrete (figure 19).

The large columns (figure 20) shown in the exhibition of this project were perhaps not objects of beauty in themselves; BUT, the products of this collaborative venture lie elsewhere.

The cohesive network of staff and students across disciplines and the creative energy, which resulted in the coming together of these people, is inspirational in itself and continues to thrive.

40 years ago Ashby (1973) was already suggesting that the student could be

challenging and changing ideas. This case study has clearly demonstrated that a collaborative setting with an unbiased and non-hierarchical structure can be a hothouse for innovative and challenging thinking. This type of positive collaborative experience breaks down boundaries creating a platform which expands creative possibilities not simply by co-operating and working with other disciplines but by collaborative voices working together across discipline specialisms to force innovation through challenge.

CONCLUSION

Having spent the last few days in solitary confinement writing this paper on the benefits of collaborative practice I am even more acutely aware of the productive paybacks of working with other people as opposed to presenting a solo voice. Learning from experience is a well-known and tested educational theory. Educational theorist David Kolb (1984) described his theoretic approach to experiential learning as a social process based on carefully cultivated experiences. If as he suggests that we place

'...immediate personal experience as the focal point for learning... When human beings share an experience, they can share fully, concretely and abstractly'.

Kolb 1984: 21

By designing our curricula to accommodate a range of collaborative experiences we will equip our graduates better for their onward journey. This student was quickly aware of the void on leaving University:

'When you step out of the confines of the University you will not be able to do it alone, and it's not till you make that big leap that you realise how important other people are to your creativity.'

ECA Alumnus 2011

The case studies presented all have particular benefits for inclusion as part of a suite of collaborative experiences to build confidence in our undergraduates. In 'Reveal and Engage' the interaction and discussion of potential collaborative practice was initiated around the practical outputs of individuals. As a catalyst initiative this project serves as an excellent foundation to establish networks. With a real relevance for graduates in a world of instant connectivity, this approach gives rise to a deeper understanding and appreciation of other peoples' practice through fuller interaction and meaningful conversation as opposed to the limitations of scanning and surfing the internet for prospective collaborators.

In the cross-cultural Wuhan project the collaborative interaction took place around the textile samples as opposed to the designers themselves. The detachment between the collaborating partners was like that of a pen pal, or a one-way radio with only one voice taking the floor at any given time. This project did challenge the preconceived notions of other cultures, however the limitations of the collaborative aspect of the experience could be described as co-operative.

The Concrete project demonstrated interaction as a dual or multi-contributory venture taking place around technique and materials. The strength of collaborative partnerships spawning from shared experience and shared vision serves as an excellent example. Here innovation is enhanced with the breaking down of hierarchy, embracing mixed teams of novices and experts all with an equal voice regardless of expertise. This paper promotes working together, not as individual components working side by side as contributors but as fully integrated co-authors. The concrete project presents fully collaborative creative development.

The thorny issue for all collaborative projects is inevitably in the assessment

process. Untangling individual contributions for formal assessment is messy to say the least, and the disentangling and analysis of this aspect requires a research paper in itself. This test example raises questions:

'The classic recent example of art schools struggling with collaborative practice would have to be the anxiety that the twins, Jane and Louise Wilson, caused their tutors when they decided to present identical graduation exhibitions, even though one was studying in Newcastle and the other in Dundee.'

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By avoiding quantitative analysis of the projects outcomes in terms of the artefacts or products of the projects and focusing on the qualitative outcomes of the learning experience, the assessment of individuals should lie in their own learning. The twins mentioned above should be assessed on their individual learning as opposed to the identical outcomes exhibited in different institutions. If the learning is demonstrated through feedback and self-assessment, this raises yet another research paper to study, the over reliance on written analysis and feedback for the assessment of a creative, practical and visual activity.

Interacting with others is an essential activity and a key element in a healthy human existence. In an increasingly screen driven society where we annotate our every move through Facebook and Twitter, collaborative projects which encourage face to face interaction, talking, making and doing together will surely enrich our existence and continue to encourage innovation through challenge and risk. As educators I believe it is our duty not only to encourage collective voices but to facilitate truly collaborative voices, or in some cases even collaborative choirs.

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FIGURE CAPTIONS AND CREDITS

Figure 1: Students preparing for Reveal and Engage.

Figure 2: An example of student profile for Reveal and Engage.

Figure 3: Example of collaboration between knit and print student.

Figure 4: Detail of collaboration between print and knit student.

Figure 5: Written sign in student presentation.

Figure 6: An example of successful collaboration across cultures.

Figure 7: Deirdre Nelson and students studying historic pieces.

Figure 8: Detail of Ayrshire Embroidery.

Figure 9: Original Wuhan Sample.

Figure 10: Wuhan sample with additional stitching and appliqué.

Figure 11: Piece by Hu Fan and Kerry White.

Figure 12: Research by James Bruce, ECA.

Figure 13: Example of concrete panels.

Figure 14: Saint Peter's Seminary, Cardross, Scotland.

Figure 15: Students in textile workshop.

Figure 16: Students in architecture workshop.

Figure 17: Students further developing ideas in architecture workshop.

Figure 18: Further explorations in joining glass with concrete.

Figure 19: Detail of print for column 2

Figure 20: Column 2.