

# ELIA Location Aesthetics Conference 2014

## Border Crossing: the Dynamic Interplay between Place, Culture and Creativity

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### Abstract

This paper outlines lessons and suggests future strategies of an on-going transferrable approach to an international and multidisciplinary collaboration entitled 'Border Crossings'. Influenced by research led practice and blended learning ideals three art and design partner institutions –operating across three year period and three time zones, encouraged mainly year two undergraduate students to share their creative process, methods, skills and responses to porous notions of place within a digital network. At its core, however, are two interconnected themes of identity and culture which contributed to the learning experiences of students and staff from Duncan of Jordanstone College of Art & Design, University of Dundee, Scotland; the Faculty of Design Ljubljana at the University of Primorska in Slovenia and the College of Visual Arts & Design at the University of North Texas, USA.

Since its inception in 2011 over four hundred participants have collaborated in the Border Crossings experience from departments of Interiors, Jewellery, Metals, Textiles, Fashion, Fibres & Weave who have each reinterpreted identity and cultural themes through the lenses of their respective disciplines filtering these through a social network. Typical of blended learning, Border Crossings combines the familiarity of studios, workshops and lecture rooms set against, and sometimes in tension with, performing within more fluid online contexts. In this instance interactions occurred using the NING network – a US based web service offering a customizable social networking site in which students' and staff could contribute to international peer dialogue. Operating throughout one academic semester students' would initially undertake research & investigation suited to each discipline, experiment with new creative processes [e.g. emotive making] and deliver on-land interdisciplinary workshops prior to meeting international peers on-line. Using the NING Network, students would upload creative works-in-progress and act as critical editors of their own evolving practice whilst also undertaking the role of 'critical friend' for their international student peers from similar disciplines.

Supported over a three year period by the interdisciplinary EPSRC IMprints research project –which explored future identity management scenarios, craft practices, smart technologies, tokens and taboos, also funded the NING network, provided administrative support and supplied the intellectual stimulus for the Border Crossings experience.

A sense of place is especially potent in helping us question assumptions of our national, geographical, societal or creative identities and disciplinary cultures. But in an increasingly digital world we are simultaneously located *here* and *there* and often construct numerous, and sometime duplicitous, identities reflecting those digital sub-cultures. How we manage those identities and navigate these locations demands attitudinal shifts. Sensitive to these issues Border Crossings explores a new digital dimension to learning beyond familiar 'bolt-on' DTP class or discipline specific CAD workshop. But there is a wider global imperative and richer digital potential that universities struggle to adapt to but which Border Crossings has attempted to bridge. Developed in response to various challenges, such as integrating research led practices into all levels of learning, discipline blurring, emerging hybrid practices and pedagogic issues of digital literacies, e-learning and curriculum internationalization are influential.

Increasingly students exhibit non-linear mosaic thinking tendencies often making meaning out of a collage of fragments whilst managing equally fragmented identities on-line- often managed naively. Morphing these to ones emerging professional identity, to ones traditional digital skills set and disciplinary cultures is vital if we are to prepare graduates to manage uncertainty. Navigating this in an increasingly asynchronous and digital world demands care in how we express and authenticate such identities. Whilst this paper highlights institutional limitations and logistical challenges the authors recognize the transferrable potential to a range of disciplines. Border Crossings suggests an alternative to the increasingly risk averse culture affecting [UK] education and instead offers an approach which enables risk and risks failure.

## Key Words:

Blended Learning, Mosaic Thinkers, Peer Learning, Border Crossings, Place, Identity, Culture.

## 1. Introduction

Border Crossings emerged as a working title in summer 2011 prompted by curriculum restructuring at DJCAD Dundee and reflecting similar change across the global HE sector. The term 'border crossings' reflects the historical and unwelcome border incursions across lowland medieval Scotland and northern England by *border reivers* and their indiscriminate economic banditry across both borders. This metaphor reflects many of the tensions in contemporary design such as discipline blurring and the border crossing attitudes of new hybrid practices in which new digital strategies play a significant role in reshaping practice and redefining borders. Alongside this is acceptance that new types of learners with more mosaic tendencies may be in a position to operate across new socially conscious practice as well as corporate contexts. The latter are embodied in IDEO's Tim Brown's definition of 'I-shaped' and 'T-shaped' designers with the 'T' implying a disposition for interdisciplinary team working and the 'I' symbolising disciplinary depth. Brown's 'I' shaped creative is familiar to undergraduate creative education but this also provokes where greater team working ought to occur in a culture struggling to break out of those disciplinary silos. [1]

Border Crossings seeks to navigate these issues. With the erosion of traditional disciplines -and the drive for interdisciplinary learning there is a concern of a splitting of creative practice, of polymath interlopers or deep disciplinarians. Richard Seymour identifies such tensions which reflect some of Brown's distinctions of 'I' and 'T' shaped practitioners, suggesting that: *'Design is beginning to show signs of splitting into two new disciplines and ultimately creating two different types of designers: the "specialist executor" and the "polymath interpolator"'*[2]

The last decade was witness to a debate among educators and institutions regarding the new generation of students that were entering -synchronously and asynchronously- real/virtual schoolrooms and lecture theatres. This new generation

(born from about 1980 and onward) has been identified in various ways: Generation Y, [3] Millennial Generation, [4] Mosaic Thinkers [5] and more recently Digital Natives or Net Generation. [6]

Regardless of these generational cultures what locates this new learner within the 21<sup>st</sup> century learning landscape are their behavioural patterns which makes them, in theory at least, significantly different from previous generations. They are described as living lives immersed in technology, *'surrounded by and using computers, videogames, digital music players, video cams, cell phones, and all the other toys and tools of the digital age.'* [7] However, we are also seeing more complex realities emerging such as the rise of the grey gamer [8] They are also described as having a positive view, as optimistic, team-oriented achievers who are talented with technology. [9]

They are considered to be active experiential learners, proficient in multitasking, and dependent on communications technologies for accessing information and for interacting with others. [10] Given this, one would imagine that Border Crossings would immediately benefit from such accomplished digitally literate learners. However, theories can tend to generalize data and miss many of the contradictions which exclude students who do not fit this definition: for example, the authors note that student cohorts can also have quite complex demographics and among this mix learners retain their own preferential learning style and can be resistant to change – particularly where new ideas challenge old web habits. The authors would agree that many students may indeed demonstrate those digital aptitudes outlined above but this does not necessarily translate into critical attitudes toward new digital experiments in the art or design studio or on the laptop.

Bennett et. al. [11] have identified two main characteristics that have served as the basis for claiming that a new model of education is needed for this generation:

1. Young people of the digital native generation possess sophisticated knowledge of and skills with information technologies.
2. As a result of their upbringing and experiences with technology, digital natives have particular learning preferences or styles that differ from earlier generations of students.

As Barna [12] described the Mosaic generation *'they are the first generation among whom a majority will exhibit a non-linear style of thinking – a mosaic, connect-the-dots-however-you-choose approach.'*

## 2. Precedents

Rather than reacting to the 'splitting' or polarisation suggested by Seymour or the distinctions between 'I' and 'T' team players cited by Brown, Border Crossings sought out connections by developing initiatives with international partners which integrated research led expertise, methods and attitudes directly into undergraduate learning. This had the additional benefit of opening up [students and staff] thinking on *e-learning* through experimentation of new digitally focussed interdisciplinary knowledge exchange. Keen to develop new forms of international collaboration that went well beyond existing ERASMUS opportunities, the team sought to build upon earlier intercultural & digital innovation whilst drawing upon IMprints research expertise and insights on identity management. These earlier initiatives helped shape the Border Crossing experience. In 2011 the Faculty of Design Ljubljana successfully collaborated with Lucerne Switzerland in the *'Have you been to Triglav?'* project exploring issues on Slovene identity [36] the outcomes of which were publicly exhibited in the National Museum of Contemporary History in Ljubljana.<sup>1</sup>

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<sup>1</sup> The exhibition "Have you been on Triglav?" was organized by prof. Axel Vogelsang and Jasna P Kralj to explore Slovenian identity and culture and was exhibited at the National Museum of Contemporary History in Ljubljana in July 2011.

Dundee's Jewellery & Metal Design department used multi user virtual environment (MUVE) approaches by integrating Second Life as a virtual classroom with the department of Metalsmithing & Jewellery at Towson University USA in a series of scheduled cross-cultural dialogues and in-progress design reviews of students' research methods and craft outcomes in order to explore different cultural approaches to design. This included creation of personal avatars, attending lectures with Second Life artists and online exhibitions such as Filthy Fluno aka Jeff Lipsky. Experiences of working with students in real time in 'Towson Innovation Island' and contributing to student presentations and class critiques pre-empted many of the challenges outlined in Border Crossings.

And from 2005-08 Interior design disciplines from DJCAD Dundee and the College of Visual Arts & Design at the University of North Texas [UNT] worked for three consecutive years exploring *e-learning* and *internationalising the curriculum* themes through a Proxy Designer Pseudo Client workshops [fig. 1] This peer to peer experience simulated the difficult terrain of client and designer exchanges in a collaborative project that required students from two institutions to collaborate remotely. In this it explores some of the inevitable conflicts, tensions and cultural or disciplinary misinterpretations which emerge from the exchange of ideas through the web and challenges of communicating object based outcomes on-line [13]

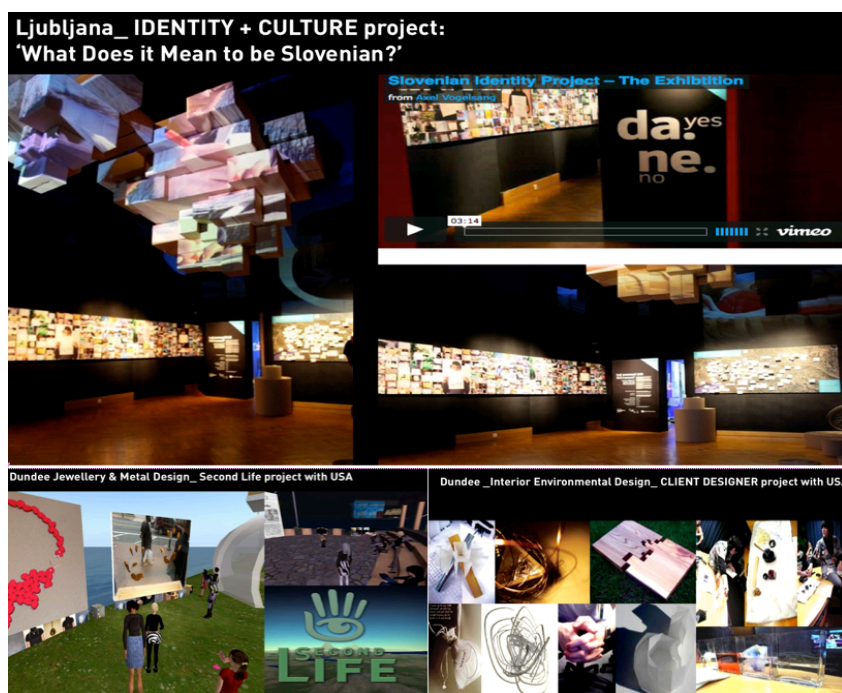


Figure 1. [top] Faculty of Design, Ljubljana collaboration with Lucerne; [lower left] DJCAD Dundee and Townson University Second life workshop and [lower right] UNTexas collaboration with DJCAD Interiors

### 3. Three Institutions, disciplines, time zones, three years of delivery.

Border Crossings was an inter-cultural design collaboration with institutions in Slovenia, USA and Scotland exploring the paradoxes, contradictions and alternative futures of on-line identity management and design internationalization. The project was multi disciplinary in spirit involving Textiles, Fashion, Fibres & Weave, Jewellery & Metal Design and variants of Interior related disciplines. It encouraged students to challenge assumptions about disciplinary similarity. In addition, a flexible approach was agreed between partner institutions in how each might interpret, frame, deliver and assess student work in response to the shared themes of identity and culture. Alongside this was the establishing of simple rules of engagement and clarifying student expectations of the extent and quality of creative conversations about each others

project work. For example, once earlier in-house preparatory workshops had been delivered in the first few weeks, academics set specific benchmarks for discipline-to-discipline dialogue via NING. Each school navigate online dialogues through additional lectures at each institution that raised awareness of common ground such as interdisciplinary working, identity management, impacts and opportunities of social network in future practice and the protocols that students were required to observe when acting as 'critical friends' to international student peers.

#### 4. Operation & Structure.

Initially institutional collaboration took the form of a triangular ménage e trois knowledge exchange with each school agreeing to design for the other in a cyclical process – e.g. Dundee designing for Ljubljana; Ljubljana designing for Texas and Texas, closing that ménage e trois loop, by designing for Dundee [fig. 2a]. Within this process schools had flexibility in how each [interior; textiles, fashion, fibres & weave, jewellery and metals discipline] framed this exchange. Creative conversations formed the foundation of the student on-line dialogues whilst rules of engagement were negotiated and benchmarks set. Conscious of the risk associated with such ventures, partner schools agreed to rationalize the risk by illustrating previous international and/or digital collaborations involving partner schools at the start of the collaboration. An important factor at the start was to identify a range of industry precedents and new collaborative and hybrid practices who embodied that 'border crossing' mentality, challenged assumptions of disciplinary boundaries and embraced risk [fig. 2b].

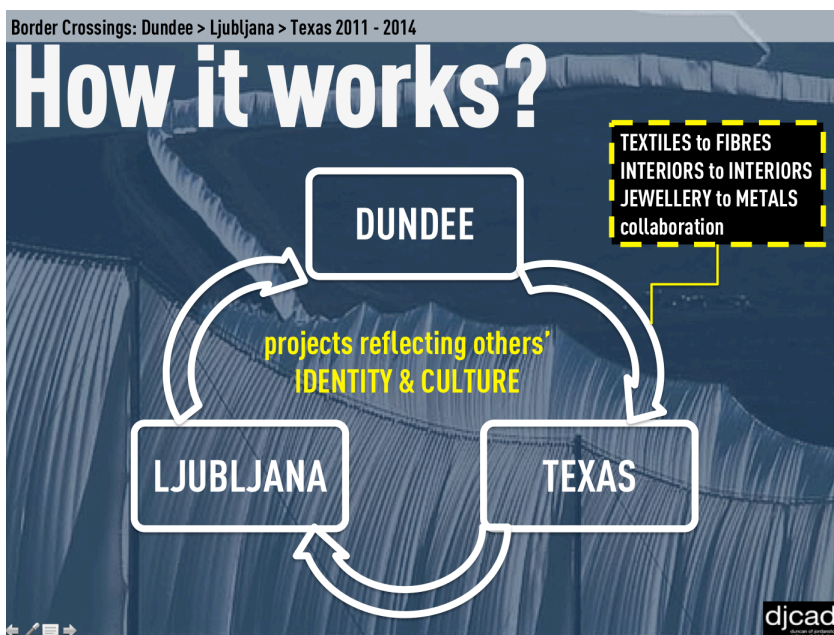


Figure 2a. The creative ménage e trois triangular knowledge exchange used at the first year of operation [2011-12]



Figure 2b. Examples of industry precedents and new collaborative and hybrid practices who embodied that 'border crossing' mentality. Greyworld, Atelier Van Lieshout, loop Ph amongst others, courtesy of Professor Paul Rodgers 'Polymath Interopers' at E & PDE Conference, Northumbria University 2007

From the second year of operation most on-line conversations occurred mid way through the semester allowing institutions space to experiment, build up student confidence and department preparedness for the actual on-line challenge. An example of this at DJCAD Dundee included a 2-3 week research & investigation phase across three departments of Interiors, Jewellery and Textile Design. This allowed creative latitude in framing research & investigation directly onto disciplinary concerns whilst allowing for delivery of discipline specific skills. Outcomes in this case ranged from site specific drawing and mixed media studies [a traditional textile design ideas generation method], to a combination of sketching and material testing for Jewellery whilst Interiors developed emotive making strategies with a subjective, and later, an objective intent. Subjective outcomes reflected instinctive responses to ones personal identity [e.g. ethnicity, family, patriotism, faith, locality, regionalism, nationalism, globalism etc]. A more objective second object sought to convey more analytical investigation reflecting the Scottish built environment.

Throughout the final 6 weeks of on-line collaboration students' own editorial instincts would kick-in. Uploaded works in progress allowed for the sharing of insights, thought processes and methodologies to be explored. Creative conversations challenged early assumptions of disciplinary similarity exposing key distinctions and difference in philosophy, curriculum, resources, attendance and facilities. Experiencing shared project themes aided understanding and benchmarking through a compare and contrast discussion on a 24/7 NING network. Students' noticing these differences [and discrepancies] suggested an increase in empathy and sensitivity for the 'other'.

An intention throughout had been to promote reflective practice and intrinsic motivations which valued enlightenment and experiences over more extrinsic motivation of grades. In reality, this remains challenging. However differences of academic calendars showed an inevitable lapse in empathy when Slovene students' complete their project on NING much later than their USA and Scottish counterparts. Opportunities to extend the Border Crossings model -in a sense franchising out the concept- will allow original partner schools to seek new collaborators who represent a better geographical, time zone and philosophical fit whilst retaining access to, and ownership of, a new Border Crossing approach from 2015 onwards.

Significantly, leading design thinkers are often skeptical of an outcome based bias [extrinsic motivation] in higher education as opposed to a process rich and reflection driven [intrinsic] ambition [14]. And in this regard students' were actively

encouraged to reflect critically on their own consumer habits on the web. An ambition of Border Crossings has always been to raise awareness of the pitfalls those private on-line actions – both in terms of identity management, theft and in helping students shift toward future digital savvy professional – important when we consider how employers are scrutinizing the social networking behaviours of potential employees.

However, throughout the three years of operation, the project was delivered to reflect core objectives such as:

- To raise awareness of students' private networked identities and to emerging professional cultures driven by technology –these are vital if we are to prepare graduates to manage uncertainty and compete in international markets.
- To engage students and lecturers in a process of critical learning exploring identity & culture through three disciplinary lens going beyond clichés.
- To engage in projects reflecting others' identities and cultures while sharing creative processes and learning to see ourselves differently as students, as academics, and as educative institutions.

The objectives of Border Crossings were supported and closely related to IMprints, [15] a major three-year research project funded by EPSRC examining popular, policy and professional expectations about identity management in the near future. Anticipating these near futures scenarios IMprints sought to map the contradictions and complexities of public and professional desires and taboos relating to future technologies of identification and authentication allowing for a externally funded research 'IN' trigger and closing the research loop by establishing a learning & teaching research 'OUT' opportunity. As an exemplar of a craft discipline [jewellery & metal design] IMprints provided an important contextual framework in which to persuade and provoke ideas amongst participating students and also providing:

- Funding to create the NING Network.
- Critical intellectual research edge to the three year Border Crossing initiative.
- Administrative support of the NING Network –a significant task given the numbers of participants engaged.
- Annual design lecture on identity management themes as part of a wider series of talks as DJCAD which ran parallel to similar talks in partner schools.

## 5. Mosaic Thinkers: Border Crossings: a NING Network

In the last few years, Web-based social media developments such as Facebook, Twitter, NING, etc. have been used to attempt to place the learner at the center of networks of knowledge and expertise that potentially can lead to new forms of learning, educational methods and impact on future employability. This and other examples comprise new forms of learning experiences better know as '*Blended Learning*' which present institutions, educators and learners with certain challenges.

Blended learning is the thoughtful integration of classroom face-to-face learning experiences with online learning experiences. However, the class-room referred to tends to reinforce stereotypical university environments that misrepresent the art & design studio culture and indeed the distinct identity and culture of that sector. It integrates the

strengths of synchronous (face-to-face) and asynchronous (usually, text-based Internet) learning activities [16] but this often fails to exploit the visual, spatial and mixed media output and potential knowledge exchange familiar to art & design higher education.

In delivering such learning experience the Border Crossings team decided to design a custom-made social media tool using NING, [17] an online platform for people and organizations to create custom social networks. NING Network offers features sets such as photos, videos, forums and blogs; and support for “Like”, plus integration with Facebook, Twitter, Google and Yahoo which are familiar extensions which most students use as private consumers.

A private, invite-only NING Network was designed under the banner of Border Crossings [fig. 3] the main reason behind this decision was because students are increasingly operating in this porous-like context comprised by Castells’s [18] ‘spaces-of-places’ such as home, university, library, etc., and the ‘space-of-flows.’ In addition, NING was used in response to the incompatibility of the partner institutions own VLE [virtual learning environments] and the relative closed systems here prevented, and indeed hindered, inclusion of the Border Crossings experience. The authors recognized the tendency amongst students nowadays have to learn how to navigate between these two spaces, or ‘dueling polarities’, as leading thinkers suggest this new generation exhibit profoundly non-linear ‘mosaic thinking’ tendencies often making meaning out of a ‘collage of fragments’ whilst managing multiple identities on-line.

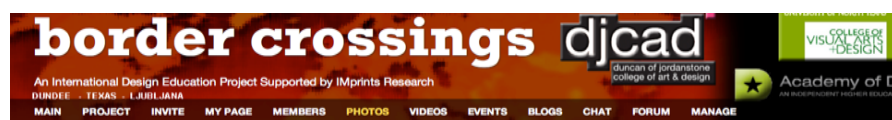


Figure 3. Border Crossings Head and Main Menu

Throughout the three years of collaboration, participants in the Border Crossings experience had work archived each year leading to the accumulation of significant numbers of uploads, membership, posts and data as indicated in the table below (Table 1), the data reflects figures updated at the last time of back up of the network (August 2014).

Border Crossings			
	2014	2013	2012
<b>Members</b>	180	187	170
	Dundee – 73		
	Texas – 68		
	Ljubljana – 26		
	Staff – 13		
<b>Photos</b>	7817	4312	1839
<b>Videos</b>	176	4	4
<b>Forums</b>	27	NA	NA
<b>Blogs</b>	1472	1363	570
<b>Events</b>	NA	2	2

Table 1. Border Crossings statistics until august 2014.

The NING Network was updated every year to reflect staff and students’ feed back, often identifying where new features would be implemented or deleted depending on what seemed to be working best. For example the ‘Events’ page was

deleted for the course running on 2013–2014 as it proved less useful than originally envisaged. Often new features were incorporated in an organic manner and to improve, for example, clearer sections designed to bring discipline to discipline exchanges closer together –such as introducing ‘Forums’ in response to feedback.

The growth in terms of student peer engagement and indeed staff enthusiasm, can be seen clearly in the same table, though the number of members did not fluctuate significantly; however each year the number of photos, videos and blogs grew almost exponentially. Reflecting on this the coauthors recognized the need to manage the data flow and saw how this avalanche of uploads required some form of control to ensure that student motivation was maintained. During the project academic to academic exchanges led to tailored solutions that met the needs of specific disciplines such as the creation of shared gallery folders at early stages in on-line discussions. In other scenarios, students took ownership and initiative in using additional social networking approaches to resolve communication with peers.

Of course Border Crossings is not the first education project to apply social media as a tool for delivering or reimagining a course, and as with any emerging instrument the use of these platforms has rallied advocates and detractors. Advocates have promoted their use as part of a ‘connectivist’ learning theory. [19][20] Supporters of using social media as a learning tool elevate these communicative connections to the level of an epistemic category central to learning processes [21]. This advocacy works under the premises of open source technologies which are ‘*democratic*’ in nature and therefore, ‘*empower*’ students. [22] and which, the authors suggests, pose the question, ‘*how will this impact on graduates employability, income and potential?*’ According to Downes however [23] ‘*this type of learning is characterized not only by greater autonomy for the learner, but also by changing roles for the teacher; indeed, a collapse of the distinction between teacher and student altogether is indicative of ‘connectivist learning.’* This is often popularly described as a shift from the ‘sage on the stage’ to becoming ‘the guide on the side.’

On the other side, detractors such as Friesen and Lowen [24] argue that ‘*social media like Facebook and Twitter are above all commercial in form and as practiced, in substance... argue that their business models are inseparable from the type of user experience that they provide.*’ Although we cannot negate that most social media platforms are based on business models and focused primarily in connecting users with advertisers within a model fostering ‘*liking*’ content, we found that making Border Crossings a private only by invitation– social network we could have all the advantages of the more altruist ideals of the web and a safe open media platform which was eminently more accessible in comparison to the closed institutional ‘VLE’s’ without the negative implications of data mining for advertising and/or ‘*liking*’ the content. We also found that while NING offers the option to monitor all the content and set blocks for certain words, that was not necessary. Students, as mentioned before, are used to managing their multiple and nuanced online identities and they self-regulated themselves as users within a community of peers treating the space as a learning tool whilst also being mindful of the rules of engagement outlined at the start of the collaboration.

## **6. Border Crossings as space-of-places and space-of-flows.**

Location, place and site offer some initial common ground for students’ to begin exploring and sharing basic lines of inquiry. However these early forays into identity and culture, also lends itself to a set of convenient cultural clichés – [a form of casual cultural shorthand] offering rather simplistic geographical context [e.g. “*Im from Dundee*”, “*Im here in Ljubljana*”, “*I am studying in Texas*”] or framing this through ones perceived ethnicity, heritage or national perspective– such as being ‘*Scottish before British*’, ‘*Texan before American*’ or a Slovene not Yugoslav. Manuel Castells [25] established two decades ago an emerging set of difference between what he called ‘*space of places*’ and ‘*space of flows.*’ The first refers to the familiarity of our physical sets of places as a main source of experiences. Social organizations and political representations are predominately place based constructs too; cultural identity is often built on the basis of sharing

historical experience in a given territory. The second example Castells offers is integrated by the material arrangements that allow for simultaneity of social practices without territorial contiguity. It is not a purely electronic space –or a "cyberspace," although cyberspace is a component of the space of flows.

On later reflection Castells [26] himself defines the space of flows as composed by different elements; first, it is made up of a technological infrastructure of IT systems, telecommunications, and transportation lines. The capacity and characteristics of such infrastructure and the location of its elements determine the functions of the space of flows, and its relationship to other spatial forms and processes. The space of flows is also made of networks of interaction, and the goals and task of each network configures a different space in which these flows occur. Within the Border Crossings scenario this was enabled by the NING Network we set for students and staff to interact, share, post, express, etc.

Second, the space of flows *"is made up of nodes and hubs. These nodes and hubs structure the connections, and the key activities in a given locale or locales."* [27] Castells described these hubs as communication sites reflecting those physical and fixed places and spaces such as airports, harbors, trains, or bus stations – zones that emphasise their inherent *hub-ness*. Such spatial hubs organize exchanges of all kinds, as they increasingly are interconnected and spatially related. However, a key characteristic of these hubs and nodes is that they are dependent on the network, that their logic depends on their place in the network, and that they are sites to process signals that do not originate from any specific place but from endless recurrent interactions in the network. The hubs for the Border Crossings project were Duncan of Jordanstone College of Art & Design, (Dundee, Scotland), Faculty of Design, University (Primorska, Slovenia) and College of Visual Arts & Design (University of North Texas, USA) and the students' peer exchanges where the social conduit in which knowledge was transported through these academic hubs.

Third, the space of flows is also made of environments for the social actors that operate the networks, in the particular case of Border Crossings, these spaces happened to be mainly laptops, smart phones and tablets although staff and students had the possibility to interact using the IT facilities each institution provides shifting from brief text like, to more fully descriptive exchanges toward face to face video sessions that brought discipline to discipline in a more emotive social experience.

Fourth, the space of flows includes electronic spaces such as websites, spaces of interaction, as well as spaces of one-directional communication, be it interactive or not, such as information systems. NING played a key role for facilitating these spaces and provided the platform that made it possible to integrate all of the other possibilities such as social media (Facebook, Twitter, YouTube, etc.), for creating forums, blogs, live chats and giving each member of the community the opportunity to have their own *'page'* and use it as a means of expression, description, collaboration and interaction. Whilst NING in its complete sense provided a portal in which every student and lecturer could, if they wished, peer into the visual exchanges across all disciplines.

In terms of the flow of materials uploaded and discussed across the student community were a growing proportion of web screen grabs, videos and other links that often merged into individual students own works-in-progress. The visual design of the NING Network, as well as the structure, operation and content was a fundamental frame for decision-making, information making, and communication. NING has an interface very similar to other social media platforms, it is also intuitive which allowed the students –digital natives– to navigate it and use it with ease and confidence. It also allowed students' to connect their Border Crossings personal page to their own personal Facebook, Flickr and Twitter accounts making it easy to stay in touch with the project.

Although Castells [28] devised this new space of flow as an emerging space, he also emphasized the persistence of the space of places, as the most usual form of spatial existence for humankind. He observed that, while most dominant activities were constructed around the space of flows, most experience and social interaction was, and still is, organized around places. An example he gives for this is how cultural identity is often built on the basis of sharing historical experience in a given territory. This was particularly relevant to Border Crossings as the main subject for the project was Identity. Increasingly higher education institutions, for example, seem to be struggling to cope with the flow of social networking habits of its students' continually being outpaced. In this app-fest and smart tech reality there are opportunities and impacts that reflect aspects of Castells ideas. Of note to art & design are the new hubs, networks and democratic processes in open-sourced public focused practices that were previously closed creative professions such as the work of Israeli designer Ronen Kadushin's part of the 'Open Design Now' [35] collaborative effort of Creative Commons which takes Castell's complex philosophy into more manageable territory.

## 7. Academies, Antisyzygy and Faculties in flux:

Reflecting further on the location aesthetics themes of the ELIA biannual conference, Castells paradigm of space-of-flows finds a useful counterpoint in the idea of Caledonian antisyzygy [29] – a concept which resonates equally well in the geographic contrasts and historical conflicts between Highland and Lowland cultures and is, in terms of an aesthetic expression evident in the constructed works of artists such as Calum Colvin [30]. Caledonian antisyzygy fixes onto the heart of identity and cultural themes and hints at the digital simultaneity of being both *here* and *there* in real and imagined time. Each of course, proved useful in framing our thinking on the Border Crossings experience. In addition to IMprints research, lectures offered contextual insights which we had hoped to broadcasting to our partners but this proved logistically difficult due incompatibility of video conferencing and timetabling clashes. Topics at DJCAD Dundee, for example, explored digital cultures, smart materials, polymaths and, [entirely unrelated to recent debates about Scottish independence, but, nevertheless fascinating] discussion on Caledonian antisyzygy<sup>2</sup>. Describing the "idea of dueling polarities within one entity" provided Border Crossings with a constructive way of reflecting on, and making meaning of the tensions and challenges experienced in working across conventional studios, the flow of web.

Antisyzygy also alludes loosely to concepts of cognitive dissonance indicating a situation involving *conflicting attitudes*, beliefs or behaviors. Festinger's (1957) cognitive dissonance theory [37] suggests that we have an inner drive to hold all our attitudes and beliefs in harmony and avoid disharmony (or dissonance). For example, knowingly posting offensive information on Facebook (behavior) has implications for the future employment as businesses are increasingly scrutinizing potentially employees social networking history (cognition). Such 'dueling polarities' go some way to explaining the caution some students expressed in being 'wrenched' from the comfort of their private Facebook actions [e.g. as private consumers] to the relative discomfort [and risky exposure] whilst contributing to creative peer conversations on NING.

Scots poet Hugh MacDiarmid reframed antisyzygy in '*The Caledonian Antisyzygy and the Gaelic Idea*' 1931-2 whilst it extends into other literary genres, such as Robert Louis Stevenson's '*Strange Case of Dr Jekyll and Mr Hyde*' and James Hogg '*The Private Memoirs and Confessions of a Justified Sinner*' also embody those 'dueling polarities' in their narrative. The work of Hogg is particularly intriguing given the impact this unique novel had on the Catalan architect Enrique Miralles – the visionary behind the Scottish Parliament building in Edinburgh; and one of the more concrete examples used at the launch of Border Crossings to illustrate where slippery terms of identity and culture might manifest themselves in the 'real' world. But running parallel to these notions of flow and antisyzygy is the continual blurring of traditional disciplinary cultures resulting in borders being crossed, new maps being drawn and new hybrids emerging. As Rodgers describes, citing

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<sup>2</sup> Prof Mike Press 'digital cultures'; Dr Sara Robertson, 'smart materials, Andy Milligan, 'border crossing polymaths'; Prof Calum Colvin 'Caledonian antisyzygy' alongside annual lectures by Dr Sandra Wilson & the Imprints collaborative research project

Tony Dunne: *"New hybrids of design are emerging. People don't fit in neat categories; they're a mixture of artists, engineers, designers, thinkers. They're in that fuzzy space and might be finding it quite tough, but the results are really exciting."*[31]

As curricula are also being reimagined so too are academic estates being transformed altering the aesthetic character of locations and rethinking their purpose. Criticisms of traditional disciplines as 'silos' set in splendid isolation seem set to be replaced by open-plan learning landscapes, or '*Lernlandschaften*' ripe for border crossing interdisciplinary experiences but how well placed might these be in accommodating the types of experiments the authors discuss here? Who knows, where '*Bürolandschaften*' failed in the open office landscape experienced by architectural critic Tom Dychhoff [32] perhaps the 21<sup>st</sup> C '*Lernlandschaften*' may indeed succeed but is the future of digital learning really so polarized between refurbished academies or distance learning cash cows? The authors suggest there are other places to play, discover and learn. Where learning is located, delivered, experienced –even archived is being continually challenged and this paper explores one collaborative approach that remains sensitive to these challenges.

## 8. Discussion

Throughout the three years of operation Border Crossings proved particularly challenging to learners, tutors and institutions. Students' expectations of how [and when] learning occurred were provocatively challenged in the experience-deliberately so. Raising awareness of the likely impacts and interferences of future digital working, of disparities between nations art & design programmes for example, and in highlighting gaps between academia and industries time frames. How, why and when digital processes were integrated into students' learning experiences was also provocative.

It was important here to start a critical conversation on differences between delivery of digital skills [normally within, and about, a specific disciplinary requirement] and skillful digital thinking which would address more complex and slippery terrain [as in the use of NING] and the obvious exposure and unease students' would be conscious of when being as effort here was built into assessment later. Innovative ambition drove the emergence of Border Crossings however reality rapidly took hold. Logistics and communication were immediately challenging for staff with international agreements proving difficult as availability of key players struggled to cope with colleagues under part time teaching only contracts and / or their parallel lives as active industry practitioners. Reflecting on the reality on the ground, students' clearly found their dual roles as 'creative editors' of their own works-in-progress and managing sensitively their empathetic position as 'critical friends' of international peers disarming and problematic; whilst casual Facebook posts and brevity of Tweeting seemed to flow those hoped for creative conversations between peers seemed rather inconsistent.

As US colleagues have observed, none of the disciplines involved in Border Crossings can be described digitally biased [as in Computing or Interaction] which partly explains initial resistance to playing in that web space. Students, mainly from second year operating from [and ultimately being assessed in] the intimacy of their department studios had to shift gear, intellectually speaking, to then repackage their work for NING and embrace how their physical work would be transformed through, and received by their on-line peers. For the vast majority of students' across all disciplines and nations, this will have been the first time that one had to embrace the idea of 'the other' in communicating ones creative expression.

Particular challenges can be discerned in terms of the limitations, operations and inflexibility of institutions being exposed slightly through the Border Crossings initiative. As many conference delegates here will recognize, academic institutions are naturally anxious about controlling digital & IT provision, including how secure virtual learning environments [i.e. Blackboard] are. However VLE's tend to be closed systems that prevent the types of international knowledge exchanges being tested in Border Crossings; there has to be flexibility in the system to accommodate this and institutions seem to be

continually reactive to the reality of more fluid digital and social networking behaviours of its own student community. However the authors also recognize several advantages discussed below:

- Students had the opportunity to reflect on their own identity, what makes them who they are and how this changes through time. They were able to make connections between their identity and their cultural and national identities. This process was enriched by collaborating with other students from their own disciplines in countries far and different from theirs, in essence exploring these issues through the lens of their disciplines
- Students learned to critically reflect on assumptions about time and collaborate in a synchronous / asynchronous manner using online tools through the NING Network often taking advantage of the linking of other social networking tools- such as Pinterest, Facebook amongst others
- Students developed empathy of/for 'the other' in a manner that emulates future designer relationships to clients and working colleagues
- Students gained direct experience from, and creative insights of, and a collaborative 'live' research projects that reflected similar international perspectives they were being asked to contribute to. This provided the critical intellectual edge to their own work by reflecting on contemporary issues around identity management.
- They were involved in a major research project, which strengthened their own emergent research-based learning
- Students participated in a peer learning experience based which enabled affective changes in attitude to school, the teacher, the subject, peers, and to the self.

These are important factors that parallel students' initial sense of arrival within discipline 'X' and their role in a community of learners – a feature which Border Crossings expands upon by extending this localized phenomenon to a global experience Schunk and Zimmermann [33] argue that such changes are important for sustainability and generalization, since they enhance self-belief, internal attribution for success, and consequently self-regulation of subsequent learning behavior. They can help develop "educational resilience", which might sustain the learner through transitions to less optimal learning environments.

In addition to more generalized disadvantages outlined above, the authors recognized more specific challenges in how students' performed over the years:

- Potential through 'forced' interactions –whether on-line or in the studio, for a loss of disciplinary depth and distinctiveness
- The digital nature of exchanges might desensitize us when sensitive social exchanges are actually prudent, polite and professional
- More needs to be done to prepare students' to 'design questions' in the way one may design a project if we are to avoid the potential for closed questions which lead poor communication
- Live feeds seem to have exposed our students as socially and culturally clumsy in some situations

- The mantra –“I Upload therefore I am” and “Uploads do not equate to rich conversations” are important lessons but these may in fact mirror the brevity and cursory nature of conversations in other non-academic contexts
- Some members of the staff were what Prensky [34] called ‘*digital immigrants*.’ He claimed that this section of the population (born before 1980), which includes most teachers, lacks the technological fluency of the digital natives and finds the skills possessed by them almost completely foreign. So, just as we expect that students’ will have various learning styles and preferences so too ought we to be mindful of similar preferences amongst staff
- Reflecting on the Border Crossing process thus far, it is clear that initiatives like this cannot be sustained if participation is based only on a ‘bolt-on’ approach.
- The reality of collaborating across different time zones can prove exceptionally challenging as this can demotivate all involved,

## 9. Conclusion

By sharing creative conversations on a NING Network students gained insights into the creative process, skills, approaches and outcomes of their international peers in a consistent and focussed manner. As an initiative Border Crossings is dynamic and exciting experiment to teach on but is nevertheless logistically challenging and can be exposing for individual students whose private web habits were being called into question. However it is essential that educators develop ways in which to shift students from consumers toward more digitally sensitive practitioners in the future.

How this all facilitates specific disciplines outcomes is interesting; how might the tactile, sensorial and immediacy of ones design work be conveyed thoughtfully and successfully through a digital medium? In what ways are concerns like these mirrored in industries use of technology, and how might year two art & design peers become better prepared and more resilient to these future scenarios?

Naturally, some tensions emerge and the project has extended debates about how to integrate digital knowledge exchanges, internationalisation and inter-cultural working. Progress has been made in experimenting with alternative *e-learning* and *curriculum internationalising* strategies –both topics featured in earlier funded case studies by Milligan and Mohr 2006. As a research group, we are now at an important crossroads where we need to reinvent, simplify and expand the Border Crossings concept into other partnerships. Border Crossings has also been about students, educators and institutions having the courage to embrace risk and risk failure. We seem to have moved beyond the obligatory ‘bolt-on’ exposure to Adobe Cloud] and expanded familiar terms such as digital native, immigrant toward digital émigré or digital deviants. Those interconnected themes of identity and culture have also been surprisingly influential in resurfacing in recent honours year projects within the three DJCAD Dundee disciplines’ of textiles, jewellery and interiors.

Border Crossings has helped each of the institutions to think strategically about how to integrate digital experimentation into the traditional studio experience. As a pedagogic collaboration, more needs to be done to clarify expectations [both from the students’ and the partners’ perspectives], manage participation and maintain interaction between students’ and academics. However, despite these logistical challenges student feedback is encouraging. An intention of Border Crossings is to encourage critical reflection of our students’ private social networking habits and how new professional web attitudes may be forged through an inter-cultural disciplinary exchange amongst peers in three countries.

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