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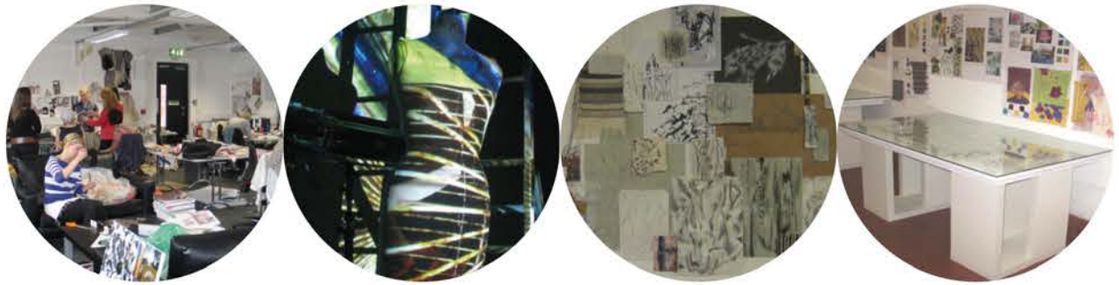
DEVELOPING COMMUNITIES OF PRACTICE: GLUE, BUZZ AND IDENTITIES OF BELONGING

COMMUNITIES OF PRACTICE | SOCIAL LEARNING
STUDENT EXPERIENCE | IDENTITY | MOTIVATION



ABSTRACT

WHAT HAPPENS TO PRACTICE-BASED LEARNING COMMUNITIES WHEN STUDENT NUMBERS INCREASE BUT PHYSICAL RESOURCES DO NOT? HOW ARE SOCIAL CONNECTIONS ESTABLISHED AND MAINTAINED WHEN COMMUNITIES ARE DISPLACED FROM THE DESIGN STUDIO AND DISPERSED BETWEEN BUSY UNIVERSITY FACILITIES AND STUDENT ACCOMMODATION? WHAT IS THE GLUE THAT BINDS A GROUP OF LEARNERS AND TRANSFORMS THEM INTO EFFECTIVE COMMUNITIES OF PRACTICE WHERE TACIT, HUMAN-HELD KNOWLEDGE IS CAPTURED AND SHARED?

This paper depicts an action research project with undergraduate Textile Design students in a British university. Planned interventions aimed to enhance visibility of students' design practice and work against the effects of a nomadic culture where students reported ideas being switched off when work was packed into bags to move between locations. The research references Wenger's hypotheses of Communities of Practice which frames learning as a form of social engagement.

DESIGN LEARNING IS SOCIAL, EXPERIENTIAL AND CONSTRUCTIVIST

History reveals design education to be social, experiential and vocational. Students come to understand their subject by building up tacit, embodied knowledge working alongside tutors who are often practitioners themselves (CLIP CETL, 2007). Schon (1987) asserts that knowledge is socially constructed through behavioural environments that are set up between learners and tutors who actively seek out shared meaning through a dialogue about practice. This implies that meaning is negotiable. Certainly, it is currently understood within the field of social psychology that individuals learn and construct meaning according to their own cultural, social and historical backgrounds (Jarvis, Holford and Griffin, 2006). The process of education into a field of practice therefore involves alignment between individuals' past and future identities. Wenger locates this kind of identity transformation within informal *communities of practice*. He states that 'engagement in social practice is the fundamental process by which we learn and so become who we are' (1998, foreword). Wenger (1998) and Schon (1983) emphasize that it is the actions of practice within a context that builds a learning community and that practice includes explicit as well as implicit conventions and cues. These are communicated through shared enterprise and common values over time.

PRESSURE ON PEDAGOGICAL PRACTICES

Higher Education is operating in a globally competitive market place. Universities are aware of the need to project themselves as contemporary, attractive places. This is leading to investment in the fabric of campus buildings and technological resources (Jamieson et al., 2000). From the perspective of widening and increasing participation, there is developing need for new ways to conceptualise educational locations. Whereas most teaching used to take place face-to-face, a paradigm shift is occurring in the way we view the role of new technologies to support learning (Logan, 2007). When developing design pedagogy, the challenge becomes both handling large student numbers in limited physical studio or workshop spaces and capturing the tacit skills, conventions and social exchange when working at distance with asynchronous communication patterns (Kvan, 2001; Wojtowicz, 1995).

RATIONALE FOR RESEARCH INTEREST

In January 2006 the Textile Design degree course in this study relocated to a newly refurbished building within the School of Art and Design. This was part of a large scale re-structuring and upgrading of the university estate. For the Textile Design course this meant a large capital investment in new CAD/CAM technology within the new textile workshops but a significant reduction in design studio space and loss of all dedicated tutorial rooms. Numbers on the course were high with over two hundred Textile Design students across levels one, two and three. As the staff team designed curriculum that would enhance learning in the new Textile Design workshops and studios, it became obvious how deeply connected teaching and learning strategies were to physical spaces. Lack of space led to design tutorials and seminars occurring in studio settings that were historically not scheduled at all to allow for self directed student design practice.

STUDENT EXPERIENCES OF LEARNING IN A NEW LOCATION

In the summer term of 2007, a small-scale qualitative study was initiated to reveal something of the undergraduate experience of learning in the newly located Textile Design spaces. As well as capturing data about the functionality of Textile Design facilities, two focus groups of first year and final year students gave a rich insight into working practices across the multi-disciplinary Textile Design course at levels one to three. The research revealed that many students, particularly first and second years with no dedicated studio space, were adopting isolated patterns of working from home rather than using the shared university facilities outside of taught time. First year students reported reticence to show their work to others and felt their visual ideas being closed down as they packed them into bags to move between locations. Conversely, final year students who worked predominantly in the design studio attributed increased motivation, output and diversity in their practice to the social exchange and visual permanence of ideas in the studio. The difference in their stories was conspicuous. The way that final year students spoke about how much they learnt from just being around each other, observing, discussing and engaging in each other's practice clarified the social nature of learning and suggested that students who were not able to find a way to comfortably and regularly engage in the course culture were unwittingly allowing potential learning to slip away.

RESEARCH AIM

Because of the vocational and experiential nature of design learning and the enthusiasm of final year students who built their own community of practice, the research assumes the importance for design students of learning through the social exchange of ideas. The study therefore takes an ameliorative action research approach, exploring contemporary literature and theories of social learning such as Wenger's (1998) *Communities of Practice* to usefully inform pedagogical changes leading to enhanced student engagement and identity with the design community. Improvements were integrated as part of on-going quality reviews during the academic year 2007-08 with changes planned in response to staff and student feedback and best practice being passed on to maximise benefits for all students. Thus, from data already gathered, the following factors provided parameters for the action research:

- The phenomenon of the nomadic bag culture where ideas are switched off as they are packed away
- Proximity over time establishes a sense of belonging and identity within a community of learners
- Students who build communities of practice report significantly enhanced learning

RESEARCH QUESTIONS

When defining these research questions, contextual points of particular relevance were the contemporary conditions of increasing student numbers, reduced physical space and advancement of communication technology making asynchronous, dispersed design practices possible:

- How can students' design practice be made more visible to each other?
- How and where (real, virtual, third space) can social exchange be facilitated when designing curriculum?
- What are sources of group cohesion?
- How can what is shared and learned in the group be captured?

Third space is defined here as the space no-one owns such as the coffee bar where, according to Sagan (2007), most learning happens.

RESEARCH DESIGN

At the start of the academic year, the first year design curriculum was reviewed by module leaders for ways to integrate a number of planned changes and capture data. (See figure 1).

The first planned change aimed to increase visibility of design outcomes and encourage discussion between peers through regular exhibitions at the end of key stages. This practice had gradually dwindled due to lack of personal studio space, high student numbers and multi-purpose use of studios as tutorial and seminar rooms by all year groups.

The second planned change involved negotiating uninterrupted access to the design studios for a period of time to allow social cohesion and learning to take place. A one week group project was modified slightly in order to capture systematic observations from staff and student perspectives about how first year students worked together as design teams at this early stage in their degree.

The third planned change was to set

CHANGES – METHODS MATRIX

RESEARCH METHODS								
Observations in reflective journal	Design outcomes saved in virtual studio	Student team critical analysis	Staff feedback on team presentations	Follow up staff interviews	Course committee meeting	Follow up student feedback tutorials	Follow up buddy feedback tutorials	End of module questionnaire
Work against the nomadic bag culture through regular exhibition exposure								
✔					✔	✔		✔
Facilitate social exchange through group projects to build learning community								
✔	✔	✔	✔	✔		✔		✔
Set up a virtual studio to support and complement physical studio facilities								
✔	✔	✔		✔	✔	✔		✔
Instigate a cross-year student buddy system on the Textile Design course								
						✔	✔	✔

Figure 1: (Adapted from Wellington 2000, p.50)

FINAL YEAR STUDENTS WHO WORKED PREDOMINANTLY IN THE DESIGN STUDIO ATTRIBUTED INCREASED MOTIVATION, OUTPUT AND DIVERSITY IN THEIR PRACTICE TO THE SOCIAL EXCHANGE AND VISUAL PERMANENCE OF IDEAS IN THE STUDIO.

up a virtual studio to support physical facilities during the group project (Hung and Der-Thanq, 2001). The virtual studio was a storage space attached to the module and accessed via the university Virtual Learning Portal either on site or from home. Each group had a folder which could be viewed by anyone participating in the module, meaning individuals could share their work and research and contribute to the team effort from different locations if they wanted to. Once the project was finished, the virtual studio would hold a digital record of design.

The fourth change was unplanned and instigated through a new student's request to be introduced to student buddies at level two in order to improve language skills and understanding of the course culture. This scheme offered the opportunity for students to enhance each others' sense of belonging to their courses by sharing experience across levels.

DISCUSSION OF FINDINGS

Detailed presentation of research findings and student commentary in response to planned changes were reported in a preliminary paper (Downes, 2008). What follows is a discussion of key themes arising from findings in relation to relevant literature.

VISIBILITY OF DESIGN PRACTICE

Findings indicate many benefits to increased visibility of design practice through regular exhibition of student work and use of the virtual studio to support group projects. (See figure 2).

Both forums allow good practice to be shared, increase skills by enhancing visual and verbal communication about the design process and outcome and make research public for feedback and discussion. Use of the virtual studio in the group project was blended with face-to-face practice in the design studio. This aimed to overcome the loss of tacit knowledge that Kvan (2001) suggests occurs when learning is dislocated. Added reasons for student enjoyment of the project may lie in the application of four principles of Vygotskian and Community of Practice learning recommended by Hung and Der-Thanq (2001): These are the *situated* design brief which has perceived relevance; *commonality* of purpose; *interdependency* of shared skills; and a clear *infrastructure* where students apportioned and agreed work according to skills they wanted to offer or develop. Thus, individuals advanced different abilities but the group held complementary skills. Wenger (1998) highlights this as a common feature of knowledge contained within communities of practice.

By the end of the year, students again reported that displacement from the physical studios undermined visibility of practice: 'I found it quite difficult to work at home and would have preferred to have a specific studio space where I could look and be inspired by others' work'. Whilst the virtual studio provided a useful storage space that aided effective team working and file sharing, visually it was undeveloped. It did not resemble the stimulating, multi-dimensional cyberspace described by Gaimster (2007). Its visual format implied secrecy and inhibited students from looking at each others' work. However, Wojtowicz (1995) sites the great potential of virtual studios to create live projects, work between time zones, connect students to global design communities and allow graded exposure of the student's own choosing to explore their developing identity as designers.

OUTCOMES OF INCREASED VISIBILITY OF DESIGN PRACTICE

Exhibitions	Virtual studio
Enhance pride	Repository of stored research
Motivate improvements to practice	Allows joint and equal access to work
Encourage openness	Enables effect team-working
Expand community of commentators	Encourages skills sharing
Help teaching coherence	Aids preparation prior to team meetings
Communicate to external visitors	Allows asynchronous working practices

Figure 2: Outcomes of increased visibility of design practice

LEARNING AS IDENTITY TRANSFORMATION WITHIN A COMMUNITY OF PRACTICE

When reviewing social learning theories there is much evidence of thinking that education is linked to identity transformation. Wenger (1998) places the experience of this within a group context saying engagement in social practice is the principle way we learn and thereby define ourselves. Influential social psychologist Mead (1934) states the whole concept of self is relative to other. This is confirmed in students' words: 'We feel that working as a team has had a positive effect on us as we have learnt our strong points and what negative aspects of our individual work we can improve on'. This implies the need to work with others to define self.

There were many instances where Vygotsky's theories of enhancing learning through working with more capable peers in the zone of proximal development (Kozulin et al., 2003) and Lave and Wenger's ideas about graded participation (1991) were apparent. Students chose to work within their teams in a variety of ways; sometimes learning from peers with more advanced skills by working alongside them; sometimes deciding to use their strengths to progress the team's design outcome.

> *'We discussed our desired skills and where our confidence lay in our abilities and together decided upon personal roles.'*
>
> ***(student team feedback)***

During the group project, it was interesting to note whether student biographies combined to enhance learning. Jarvis, Holford and Griffin (2006) see individual learning as an interaction between self and others and collective learning as demonstrating an outcome that goes beyond individuals' capabilities. Certainly, during the group project staff observed and students were able to articulate instances of both of these. It was evident that individual skill biographies could enhance or check the effectiveness of the group outcome.

However, Wenger (1998) focuses less on whom learning belongs to than how learning changes who we are. Reflection at the end of the year captures students talking more in terms of how much they've learnt than how their identity has changed. Still, Wenger's theory that engagement in social practice is the fundamental process by which we learn is tangible in module feedback: Forty-five out of sixty-eight students spontaneously report learning a depth and breadth of textile design knowledge within practice-based workshops as the best aspect of the design module; Forty-one students think that being together in workshop groups that change periodically has been the best way to get to know each other. There is a noticeable link between learning students most enjoy and its social character (Austerlitz, Aravot and Ben-Ze'ev, 2002).

BOUNDARIES TO ENGAGEMENT

A sense of belonging is an important part of students' ability to engage. Tutors observe that whilst the majority of students found this unproblematic, a minority had difficulty contributing to the team effort.

> *'There were several occasions when not all team members were present, this hindered development as progress relied on the strengths of individuals.'*
>
> ***(student team feedback)***

The group articulate frustration at this perceived lack of commitment but the minority voice is not captured. Literature suggests a number of possible reasons for inability or unwillingness to identify with the group. Sagan (2007) reminds us that we have not all been given the same sense of our own value or ability to contribute. This highlights the necessity of building trust before ideas can be shared and learning can happen. Trust is a factor highlighted by a number of writers, particularly those working with dispersed communities with asynchronous working patterns (Wojtowicz, 1995; Kvan, 2001). Similarly, displacement from studio practice dislocates communication, slowing integration into the Textile Design learning community.

Within undergraduate higher education students are immersed in their subject to provide foundational and cultural knowledge. Sometimes marginalisation comes from lack of awareness or skill to participate. Applying Wenger's three infrastructures of learning: engagement, imagination and alignment, Shreeve (2007) identifies attitudes of non-participation that

lead to exclusion from the course community. (See figure 3).

Along similar lines, Meyer and Land (2003) refer to threshold concepts as conceptual building blocks required for progression from peripheral to core understanding of a subject and troublesome knowledge as difficult to explain, often tacit, embodied knowledge that requires participation and practice prior to accomplishment. In this context, successful group work and guided participation from tutors can invite people in from the edges by passing on skills and insight in the practice setting. Engagement over time initiates a gradual transition in identity and the actions of practice provide experiences to move students from legitimate peripheral participation at the beginning of their Higher Education journey into full participation in the design community on graduation. Communication with students who have made more of the journey, such as the second year buddies, provides a potential support structure for this. First years also request more opportunities for social events where informal relationships with contemporaries are facilitated. Course reps suggest joint live projects and trips to exhibitions and trade fairs across year groups with the same aim of providing a chance to network.

THE MATRIX THAT CAPTURES LEARNING

So, how is learning captured? When this research was initiated there was a sense of learning slipping away through lack of opportunity for social exchange. This seemed to be caused by displacement from studio practice, interruptions to learning and reduction in visibility of the design process. Lave and Wenger (1991) feel that the matrix for learning is provided by the ability of the group to co-participate; this is initially without the need for any particular commonality of understanding.

This research has identified sources of cohesion within the actions of practice of the group project and through the visibility of exhibitions. Students demonstrated how a common goal and interest connected individuals and provided talking points; shared meanings emerged as they negotiated and adapted ideas and gradually embodied identities of belonging. When looking closely at phenomena at these events, there was evidence of social energy or 'buzz': Animation, excitement, concentration, focus, creativity, enjoyment, serendipity, fun, play, wonder. These words are similar to those used by writers describing the process of knowledge becoming embodied. This is where the glue that binds a community is to be found. Emotions of shared experiences connect people long after the event and emotional interactions construct student's learning approach and motivation (Austerlitz, 2007; Austerlitz, Aravot and Ben-Ze'ev, 2002). This leads to the conclusion that it is social energy, stimulated by the actions of practice in a defined context, which connects people and captures human held knowledge within a community of practice.

CONCLUSIONS

This action research has questioned how and where, under circumstances of increasing student numbers, with finite physical resources, to create the environment for the open, social exchange of ideas that are so valuable to design learning. When designing curriculum, there is now a subtle shift in emphasis away from the content of taught sessions and towards designing circumstances which facilitate social exchange within a defined context. This is in order to encourage participation in actions that align with being a designer and help build a sense of belonging to the local and global community of practitioners. This means that curriculum design must move beyond the finite physical facilities that the university has at its disposal and connect to the infinite facilities of the design world; and that the once hidden curriculum of social exchange (Dutton, 1987) should be acknowledged and facilitated.

Identities of non-participation	Identities of participation	Mode of belonging	Identities of participation	Identities of non-participation
Being isolated or excluded – perceiving boundaries	Doing things together with common goals	Engagement	Having one's ideas or thoughts valued and adopted	Marginality through being ignored
Prejudices and alienation through stereotyping	Affinity to a community which is embodied (by journals, artefacts, key figures)	Imagination	Vicarious experiences through stories and examples	Assuming that someone else knows what's going on
Submitting – things being done to you	Allegiance to the course, to the discipline	Alignment	Persuasion through directed experience	Literal compliance to the letter not the spirit of enquiry

Figure 3: Identity in Higher Education (after Wenger) (Shreeve 2007, p.20)

The benefits of group working are liberating for design, breaking down boundaries and creating new knowledge; there is high potential for innovation. To connect and inspire people in collaborative learning practices offers an interesting and inspiring challenge for education. It involves re-framing learning as a collective rather than an individual pursuit when ultimately, degree awards are given discretely. Nevertheless, it seems beneficial to build collaboration into the curriculum at appropriate opportunities.

With the challenge to quickly engage large numbers of students in the social process of learning and the gradual process of identity transformation, the requirement to facilitate informal social exchange that used to happen of its own accord must be acknowledged: Gaining a sense of belonging within the course culture enhances student enjoyment and ability to learn. Research has shown that making practice visible encourages an attitude of openness which promotes the proliferation of good practice. In this scenario, ideas are discussed, perspectives transformed, experiences shared and contacts made.

The benefit of this research has been to look closely and systematically at the effects of social exchange and visibility on the quality of design learning and student experience. The inquiry was stimulated by a desire to capture learning in a context of great change. Perhaps its most important contribution has been to reveal how potential learning is lost if a community becomes dispersed – thereby diagnosing a contemporary pedagogical imperative: the facilitation of human connections to stimulate and motivate an identity of belonging. These intangible factors of human emotion and social energy form the matrix that captures learning in a community of practice.

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