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A POSTGRADUATE DESIGN LEARNING EXPERIENCE: UNDERSTANDING THE EFFECTS OF COMMUNITY, CULTURAL AND CONTEXTUAL ENVIRONMENT.

ABSTRACT

This paper describes on going research that investigates how learning (students and tutors) takes place in a multi-disciplinary, multi-cultural postgraduate design programme in the UK. The research maps and makes explicit the effects of community, cultural and contextual environment on learning. Initial findings have identified that learning is taking place within communities of practice and further research is used to explore reasons for its emergence. The authors evaluate and discuss the effects of learning in a post disciplinary and multi-cultural environment, and its value to current design postgraduate pedagogy. A social model of learning and communities of practice is evident in the design programme studied and preliminary findings indicates that this model is particularly relevant model to adopt in the current post-disciplinary era.

Keywords: *social practice theory*, *postgraduate design education, social learning*.

INTRODUCTION

This research began as a sense making activity for the teaching team in order to make explicit the team's philosophy and pedagogic practices. The research is based on the teaching practices of two postgraduate masters level design programmes at a UK-based university, over a three-year period. The two programmes cover a variety of design disciplines with ten pathways, ranging from 3D, Fashion, Visual Communication and Design Management subjects. In addition, the student cohort also includes students not traditionally trained in design. For the purpose of this paper, we are distinguishing between postgraduate taught and postgraduate research. We are focusing on postgraduate taught at masters level, with set components that are needed to be delivered to students. Students have to undertake a specific route of study alongside developing their own design project.

The UK postgraduate design education is a growth area, driven by an internationalisation of higher education (Knight, 2008). The total number of international (non-European) postgraduate taught student numbers in the UK rose 19% in the last three years, from 44,225 in 2006/07 to 52,635 students in 2008/09 (HESA, 2006-2009). As a result, there is an increasingly wider cultural mix to the student cohort, and increasing wider disciplinary base and experience.

Research in design postgraduate learning experiences have been focused mainly on postgraduate research, with studies focusing on a range of issues such as supervision (Hockey and Allen-Collinson, 2000; Hockey, 2003), research training (Newbury, 2002; Mellies, 2009) and rigour in practice-based research projects (Candlin, 2000; Prenctice, 2000; Wood, 2000; Biggs and Buchler, 2007). In comparison, research into postgraduate teaching at masters level is limited. Studies directly related to master level learning experiences include a paper by Vogelsang et all (2008) which discusses the relationship between writing and visual practice at masters design education, while Young et all (2009) explores how postgraduate students acquire skills through a reflective process of thinking and doing. In general, discussions on how learning actually takes place in these newly formed and growing multi-cultural, multi-discipline environments for design education has not benefited from a wide and diverse literature.

LEARNING THROUGH A SOCIAL PROCESS

There is now a wealth of evidence to suggest that learning happens through a social process rather than an instructionist model of where a teacher 'transmits' information to students (Lave and

Wenger, 1991, Wenger 1998, Bloomer and Hodkinson, 2000; Colley et al, 2003; Crossan et al, Rogers, 2006). The social-cultural approach promotes the idea that the learning context is active, in that learning is shared and the role of the tutor is to help facilitate meaning constructions in the students. This approach draws heavily on the work of Vygotsky (1978) which builds on an emergent view that humans develop higher order functions out of social interactions. Learning as Vygotsky described it is being embedded within social events and occurring as a child interacts with people, objects, and events in the environment. Hence in order to understand how learning occurs in individuals, one must also study the context of learning and how learning occurs in social situations.

Group learning is seen to provide more realistic social contexts in which to learn and helps sustain students' interests through a more natural learning environment, taking a variety of forms and practised in different disciplines. Additionally, studies on international student experiences (Montgomery and McDowell, 2009; Gao, 2006) have indicated the importance of a social-cultural approach to learning, in particular the forming of social groups which resembled communities of practice.

The concept of "community of practice" refers broadly to a social theory of learning focusing on learning as social participation. Practice develops over time through a shared negotiated engagement towards a specific goal. Learning, as Wenger (1998) suggests can be thought of as 'shared histories of learning' and does not only occur in classrooms and training sessions but through participation in an individual's communities and organisations.

Extending Vygotsky idea that learning is inherently social and participatory, Lave and Wenger's work on communities of practice (1991) describes how communities with shared aims and interests are formed organically to pursue common knowledge goals. Lave and Wenger's work was initially used to describe situated learning in workplace environments but is also heavily used to describe how learning occurs in more formal learning environments (Smith, 2006; McDowell & Montogemery, 2009; Tobell et al

2010). Wenger himself acknowledges that while the term 'Communities of Practice' is new, the experience is not (1998b, pg 7).

COMMUNITIES OF PRACTICE IN POSTGRADUATE DESIGN EDUCATION

> "Communities of practice are a specific kind of community. They are focused on a domain of knowledge and over time accumulate expertise in this domain. They develop shared practice by interacting around problems, solutions, and insights, and building a common store of knowledge." (Wenger, 2001, p. 1)

The concept of "community of practice" refers broadly to a social theory of learning focusing on learning as social participation. Practice develops over time through a shared negotiated engagement towards a specific goal. Members of a COP are informally bound together by shared expertise or a particular interest (Wenger & Synder, 1999, pp. 139-149). They share their experiences and knowledge in free-flowing creative ways, fostering new approaches to problems. Newcomers to a group learn from existing participants through a process of discussion, sharing, negotiation and reflection, not unlike the apprenticeship model common in design education. Through these processes, members move from being a novice to being a journeyman and finally to achieving expert status (Brown & Duguid, 1996; Lave & Wenger, 1991; Wenger, 1998b).

Fox (2000) as cited by Corlett, Bryans and Mavin (2006, p. 158) views COP as a specific version of social learning theory, arguing that its principle element is that its members learn by participating in a shared activity. Other social learning theories take social interactions into account, but only from a physiological perspective. Corlett et al (ibid) view social learning on two levels: firstly that we learn with and from others in all our social relationships and secondly that social context helps us make sense of the experiences that we encounter within it. We believe that COP is a particularly useful way to discuss design postgraduate learning, compared to a behaviourist, cognitive or constructivist approach due to its focused on shared learning.

Why is social learning becoming more relevant to design educators? Designers are increasingly working in a post-disciplinary era in which complex problems stretch across traditional disciplines and cultures (Moggridge, 2007). This requires an individual who is comfortable working in cross-disciplinary teams, communicating and sharing knowledge across different domains. Learning together is as important as communicating with each other.

In contrast to undergraduate design programmes, whose aim is to equip the student with practical skills in order to successfully operate within a professional environment, postgraduate education is focused on achieving personal mastery through the application of theory in their own practice, and applying skills in different contexts. It provides students with the opportunity to learn from their peers as much as from their tutors.

MA DESIGN AND MA DESIGN MANAGEMENT PROGRAMMES

The MA Design (MADE) and MA Design Management (MADM) programmes are postgraduate programmes offered through a school of design located within a UK-based university. The two programmes share an integrated framework in which theoretical modules are delivered to both cohorts simultaneously. The aim of the programmes is to help students develop the tacit skills needed in the work place, to have authority, to be able to argue and to negotiate and develop cultural awareness. The staff team comprised four subject leaders (3D, Fashion, Visual Communication and Design Management) with other tutors linked to delivering the theoretical modules.

The MADE programme consists mainly of students with a design background, in contrast to the MADM's students who have much wider educational and professional backgrounds, for example coming from marketing, business and manufacturing sectors as well as from design. Both groups of students bring considerable cultural diversity, as around 80% of the students are non-UK nationals. The community members in this context are therefore made up of designers and non-designers, with a range of working experiences and cultural backgrounds.

The MA framework evolved from delivering a very specific postgraduate programme (MADE) to one that now encompasses nine different specialism pathways within MADE and a new programme, MADM, introduced 3 years ago. The development of this framework has been organic, practical and reactive. The staff team did not specifically set out to create an environment conducive for a community of practice to emerge but instead focused on creating a framework reflecting the key pedagogic principles of the programme and school. The emergent practices in the programme were also shaped by collaborative opportunities with external organisations, staff's research interests and a desire to exploit the diverse educational and cultural backgrounds of the student cohort.

In line with Wenger's view on shared practice (1998b, p. 85) we did not attempt to romanticise the development of COP but objectively described and reflected the situation within the two programmes. We recognised the benefits as well as the weaknesses of a strong COP and reflected on how this has changed the learning experiences of the students and staff

RECOGNISING AN EMERGING COP USING WENGER'S THREE DIMENSIONS OF COP

In Wenger's view, a COP can be identified through certain characteristics, described as the three dimensions of COP (Wenger, 1998a) which are:

How it functions: the relationships of *mutual engagement* that binds members together into a social entity.

What it is about: it is a *joint enterprise* as understood and continually renegotiated by its members.

What capability it has produced: the *shared repertoire* of communal resources that have developed over time.

Wenger describes these dimensions as characteristics required for a coherent community to develop. We will briefly discuss the characteristics of these three

dimensions before providing specific examples from our MA programmes in the next section. Key characteristics have been made bold to highlight their relevance to our case.

MUTUAL ENGAGEMENT

Practice only exists if people are **engaged in actions whose meanings are negotiated with one another**. Wenger stresses that membership is not just dependent on sharing a similar social situation or being in close geographical proximity. Signing on to the MA Design and Design Management programmes, for example, does not automatically guarantee the student a place in this community. Rather, it requires active engagement from the student with rest of the community.

Wenger is careful to point out that although the participants come together for a shared interest and purpose, the community is not necessarily homogenous. The success of a community comes from the **diversity** that each participant brings, beyond the shared interest. Identities becomes interlocked and articulated through mutual engagement but are never fused. The strength of the community is the complementary knowledge of its members, collectively contributing to the group's knowledge.

Despite the positive connotations of the term 'community', Wenger's view of COP is not necessarily tension-free. He points out that some of the most successful COPs include **conflict, tensions and disagreements**. In observing and reflecting practices amongst our students, we have been careful to record both positive and negative characteristics described by Wenger.

JOINT ENTERPRISE

Joint enterprise is a result of a collective process of negotiation that considers the complexity of mutual engagement, and through the process of this negotiation the participants define their terms of engagement, leading **to mutual ownership** and **responsibility**. Sharing a jointly negotiated enterprise means that the participants **share common dilemmas, challenges and questions**.

There is an element of **resourcefulness and ingenuity** to a COP as it involves operating under specific constraints, whether institutional, social, cultural or historical. These constraints are **context-dependent**. In the case of the MA programmes, these communities operate within the constraints of the university, the programme structure, available resources, pedagogic aims and the individual goals of its members.

The jointly negotiated enterprise is not a static object, it changes according to conditions and the development of its members. The same can be said of the **mutual accountabilit**y that arises from these negotiations, with each member having responsibility not only to the central concerns of the group but also to other members. It is used to further the practice as students develop an altruistic sense to contribute and share knowledge for the good of the group.

SHARED REPERTOIRE

The final characteristic of a successful COP is its members having a range of activities, relations and objects that are shared and understood. This includes not only the resources used in the discourse (for example **words, phrases, gestures, symbols, actions and concepts**) but also includes the manner in which they are delivered and expressed. Each member of the community brings their own understanding and interpretation of these resources. The historical development of this shared repertoire may bring with it issues of ambiguity for new members, but this should be seen as an opportunity for the production of new meanings.

PRACTICES THAT ENABLE A COMMUNITY OF PRACTICE

This section maps and makes explicit our practices and the conditions that we have identified as having encouraged a postgraduate COP to emerge.

ENCOURAGING ACTIVE ENGAGEMENT AND NEGOTIATION
Context enablers

Throughout semesters one and two, students are engaged with group projects alongside their personal project. Students from the nine different design pathways and design management are placed together in mixed groups, constructed to provide each team with a balance of design managers and designers. This collaborative working encourages social learning and peer support. We underpin this with a module in Reflective Practice that enables individuals to understand their individual practices and encourage group reflection. We believe reflection is not only a conversation with oneself but also a conversation with others that bring forth insights.

The 'live' collaborative projects are chosen for their non specific discipline focus, such as nano technology, recovery and well being, printed electronics. This way students have to re-think their roles and capabilities, as no expertise will be automatically more relevant than others. It is a level playing field.

Being a member of different communities of practice is not alien to us. Wenger points out that we are used to moving in and out of different communities in our daily life (Wenger, 1998b, pp. 6-7). We must consider the importance of identity and that in order for any student to bring their own expertise to the community, they have to be confident in their own identity, expertise and skills. The students must firstly develop their own knowledge area using the community to support this learning, before using their personal mastery to contribute towards the community. We use Reflective Practice as a research method to enable this personal mastery to develop, supported by a range of theoretical modules such as Creative Thinking, Contemporary Influences and Cross-Cultural Communication.

To encourage familiarisation and to introduce our concept of individual and team learning a social trip is arranged at the beginning of the programme as the first step towards community building. Additionally, all introductory activities within modules are designed to provide opportunities for students to share their experiences, skills and influences in order to encourage individual identities to emerge. This is important as identities and practices are closely linked together (Wenger, 1998b, p. 149) in that a practice is developed through how a person negotiates ways of being a member in a particular context.

Developing a shared repertoire not only revolves around what we deliver but also around the learning experiences of the programmes. Having a good understanding of how the programme is run, its structure, staff expectations and assessment strategies are integral parts of the postgraduate experience. We take advantage of having two student intakes, one cohort starting in September and another starting in January. The theoretical modules are attended by both sets of cohorts enabling the existing cohort to act as unofficial mentors to the new intake, inducting them into the postgraduate community. Additionally, group projects provide a way for us to mix existing and new students into the programme in a structured manner. We observed that in general the new cohort settles in quickly and proceeds to mix freely with the existing cohort within weeks.

Having a dedicated room for the postgraduate students to 'claim as their own' is considered to be a very important part of community building. Currently, the postgraduate students share a studio space functioning as a teaching, studio and discussion space. While it has been advantageous for the students to have a dedicated postgraduate space, a difficulty lies in the fact that it is an open studio without an easy option to divide the space. The growth of students from 40 to 80 over the last 2 years has strained physical resources. This trend of continued reduction in physical space with increasing student numbers can be observed in other postgraduate programmes. This perceived constraint has impact on the development of shared learning and COP. We have found this lack of space to be a surprisingly pivotal contributor with both positive and negative effects. One positive element, the psychological aspect of having an owned space, even when shared, helps the group build a communal repertoire represented through physical objects, for example brainstorming notes, boards and ideas.

We recognize that we can only help artificially create circumstances to encourage social learning to take place. How well a group of students work together depends entirely as much on happenstances as well as personality and experience mixes. This was the case for a group of students who started out as complete strangers who happened to sit at the same table, this formed their initital working group on the programme, consisting of 8 members. Out of the original group, 5 students went on to form a company after their graduation.

DIVERSITY AND IDENTITY

Students recognise the advantages of having a diverse membership to the community. This was evident in discussions surrounding the theme of the year-end exhibition. Students wanted to celebrate this diversity and recognised the role it plays in shaping their individual learning.

Each student's identity within the postgraduate community is layered and fluid. They can belong to several communities of practice. They may feel part of the larger postgraduate community (comprising both programmes), but at the same time they are members of their own subject specialist group within Design or Design Management. The group projects also create opportunities for them to engage with a smaller group of peers over a shorter period framed by a specific goal.

While we believe that having a diverse group of students has been beneficial to the community, it has also created conflict and tension. Group work has brought up issues of communication problems between students that would otherwise be overlooked. Students have had to learn teamwork and develop strategies to overcome conflict within teams through negotiation. As tutors, we have to be mindful of potential problems arising from collaborative work and ensure we respond quickly.

Students that we spoke to recognized the importance of having different professional and cultural experiences, as they see this as a enriching the knowledge of the group as a whole. It also helps that students come from a diverse design background, ranging from fashion, graphics, product to interior,

while some students come with no design background at all. One student clearly framed her experience around the notion of competition. The students could clearly see the difference between their undergraduate experience and postgraduate experience. Under graduate was very much focused on the individual, where peers are seen to be a competitor rather than a collaborator. She felt less threatened by her current team members as they were not 'competing' in the same subject area and have different competencies from her own, which she can learn from and rely on. She was clear that, students foremost identified themselves by their subject expertise (ie fashion designer) but also by their role in their team projects. In this way, identities are forged and layered within the community.

JOINT ENTERPRISE AND MUTUAL ACCOUNTABILITY

A characteristic of a community of practice is the emergence of behaviour or actions that suggest shared ownership and responsibility of problems, dilemmas and challenges. A key concern for students is the availability of dedicated workspace. This has been an ongoing problem for staff due to the physical constraints of available space. Rather than simply highlighting the problem, students have been proactive in deriving possible solutions for staff to present back to the school's executives. This constant dialogue between staff and student is a conscious decision by staff to encourage students to take ownership of their learning and their learning conditions. The development of the programme thus becomes a joint enterprise between staff and students.

An unexpected result of having only one workspace for students to work in is that students are 'forced' to work in public, to have their work out in the open, available to be scrutinized by his or her peers. This enforced sharing only works if there is a level of trust in the community. Students described how group work has helped them gain confidence in their own ideas and their ability to share with others. The concept of sharing was very important to the difference in experience between undergraduate and postgraduate for the students we spoke to. Their learning experience is something to be shared and

supported rather than used to compete with one another. Their undergraduate experience was highly competitive, despite working in studio communities in close proximity to peers.

This supports the staff conviction that the undergraduate has parallels to the apprentice stage in skills acquisition (Young et al 2009). The postgraduate has to have mobility to work with other disciplines and communities, outside their immediate subject specific area to develop an understanding of their own capabilities and worth, tested against real life situations and people.

At postgraduate level, we actively encourage students to take ownership of their own learning through the way we teach, supervise and manage students. We make it clear that we view students as experts in their own right, and they are encouraged to have a learning plan as a way to reflect on what they want to improve on. This change in the relationship between tutors and students is recognized by students. Tutors are seen more as a supervisory role, rather than one of a teacher. Students view tutors as experts in their own fields but also guides to rely on when they need advice on their own project directions. One student articulated two clear relationships with tutors, for theoretical underpinning modules the tutor is expert delivering knowledge, for the personal project work and thesis as facilitator/guide. Managing and facilitating this change of relationship from the master/apprentice model to one of expert/guide model is not easy as a majority of our students come from a traditional apprenticeship model where authority must not be challenged.

HISTORY & AMBIGUITY (SHARED REPERTOIRE)
Having a shared repertoire of words, phrases, gestures, symbols, actions and concepts is an important aspect of a strong COP. Due to the diversity of the cohort, creating a shared repertoire of resources is an important step towards enabling social learning. We have a number of approaches to facilitate this. Group projects provide an opportunity for students from non-design backgrounds to immerse themselves in a design project that will introduce them to the concepts, vocabularies and

processes of design. At the same time, existing students are able to mentor newer students beginning their learning journey, resulting in the overlap of expertise levels akin to a real-world scenario.

A key way to evaluate if students actually understand the programmes' aims and objectives can be evidenced by the way students are asked to articulate their learning experiences. In conversations with the external examiners, students (without prompting or coaching) were able to express how and what they have learnt. One student described how the programme has enabled her to reveal and articulate her design process while working in groups have helped a student develop better communication and management skills. The manner in which the students are able to describe their learning experience suggest a level of self-reflexivity and critical evaluation in their own learning experience. Perhaps a caveat to this understanding is that weaker students are unlikely to offer up their opinion on this matter. However, our reflection of the past few years on students who failed to engage with the aims of the programmes have a common trait, in that they have failed to take ownership of their own learning and did not demonstrate an understanding and application of the key tenets of the programmes, which are mastery, reflection, communication, enterprise, research and innovation.

Staff learning
Having a shared repertoire between the staff is just as important due to the transient nature of the staffing for the two programmes. A review into postgraduate taught programmes in England (Yee, 2010) has shown that a majority of design postgraduate programmes are staffed by tutors teaching at different levels. Similarly in our institutions, our teaching staff has been transient, moving between different levels. New tutors are introduced on a yearly basis replacing ones that have moved on or have changed focused into different levels. Hence developing a shared repertoire of aims, concepts and philosophy has not been easy. However, this situation is improving as we now have at least three full-time staff dedicated to the

development and delivery of the postgraduate programmes.

We recognise the importance of having a core team to develop a community of practice as vital to the improvement and development of the programmes. We identify that staff learning works in similar ways and in parallel to the student learning experience and is truly transformational. The core team members are diverse in backgrounds and have responsibility for specific learning elements of the programme. The programme is moving towards applying learning from the theory modules through a single live collaborative project which takes a lot of understanding, trust and sharing within the team. It gives us an understanding of how our own capabilities underpin a holistic student experience. Articulating, recording and writing together has helped this understanding. Future development of our own research expert knowledge provides research momentum for the group and identifies further gaps to explore. This should feedback to the students.

BENEFITS

One of the major benefits to the community is the diversity of the students' prior experiences and their differing aspirations. Design managers and non-design graduates work with designers from different disciplines. Non-designers benefit through learning by immersion in design projects and in the community as a whole. The tacit nature and behaviour of designers and the learning environment of the Design School plays a big part in their learning, almost as an assimilation or secondary learning process. This is a powerful experience in a supportive community.

One of the most unexpected side effects of the community is the shaping of the disciplines themselves. It has helped to consolidate the programmes' stance, identity and principles collectively. The Design Management programme has developed a softer, innovative problem solving approach around reflective practice. In the MA Design programme, the benefit of designers working with other designers outside their domain as well as with design managers has provided them with a

unique learning environment close to real-world experiences.

CHALLENGES

PITFALLS, RISK AND CONTROL
The educational environment is changing rapidly. Cuts in HEFCE (Higher Education Funding Council for England) funding and government restrictions on undergraduate numbers, have resulted in many universities identifying postgraduate level as one of the few areas able to sustain growth. The traditional overseas market, historically attracting mainly business students to the UK, is now providing new markets for Design. This points to a sudden increase in student numbers at postgraduate level for many design schools and universities are recognising potential for increased income. The projected increase in postgraduate student numbers, (at our university we are targeting a 50% increase in five years) will present one of the biggest challenges for the communities of practice now developing. Anticipating this growth, how do we maintain the flexible approach that will encourage and implement the re-configuration of new programmes? Are we able to accommodate 160 students without fragmenting the experience? What is the optimum size for a community to flourish?

CONTROL AND CHANGE
We do not have control over a community of practice and can only provide a culture for it to grow and flourish. The community will transform with its members and as different relationships are made. The external environment will change, with availability of resources and new constraints impacting on the groups. Staff will develop and bring new knowledge. It can be argued that the unpredictability of the postgraduate environment presents a major opportunity for innovation in pedagogy. If we aspire to be responsive to these changes, how will this bottom-up approach impact on the larger institution and the rigidity of regulations?

ASSESSMENT
This increased recognition of peer learning as opposed to teaching will impact not only on teaching

and learning practices but also on assessment. Traditional methods of quantifying individual learning outcomes become obsolete when trying to understand and value the learning acquired by being part of a group. One of the biggest challenges will be re-thinking our attitude to learning and assessment.

NEXT STEPS

We have detailed a number of challenges that we have to face in the near future. Our task will be to develop flexible and nimble strategies to address these challenges without being overly precious about our existing communities. Future studies would develop our understanding of how knowledge is shared and transferred between students by documenting and analysing their interactions.

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