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Learning is better than teaching because it is more intense: the more that is taught the less that can be learned
Josef Albers

Teachers' Academy **Papers** Edited by Anne Boddington & David Clews

Teachers' Academy Papers

European League of Institutes of the Arts

CENTRE FOR EXCELLENCE IN TEACHING AND LEARNING THROUGH DESIGN

University of Brighton

The Art Design Media Higher Education Academy Subject Centre

learning**teaching**research**creativity**

Teachers' Academy Papers

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The European League of Institutes of the Arts, ELIA , founded in 1990, is an independent network of approximately 360 Arts Education Institutes covering all the disciplines of the Arts - Dance, Design, Theatre, Fine Art, Music, Media Arts and Architecture - from 47 countries. ELIA is very grateful to The Dutch Ministry of Education, Culture and Science, the Foundation for the Amateur Arts and Performing Arts and Fontys Hogescholen

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FOREWORD

Klaus Jung, Chair Steering Committee
Carla Delfos, Executive Director, ELIA

We are very happy to present this publication to accompany the third ELIA Teachers' Academy 2007 in Brighton. The first Teachers' Academy took place in 2003 in Barcelona, the second in 2005 in Rotterdam and the next Teachers' Academy is planned to take place in Sofia in 2009.

It appears that the ELIA Teachers' Academy has become a successful tool in professional staff development for teachers and researchers within Higher Arts Education in Europe. We are very grateful for the continuous input from ELIA members, the hosting institutions and the Teachers' Academy participants over the previous years. Their input has been vital in developing this initiative to the high level of quality, which has proven attractive to so many of our colleagues.

We are particularly grateful for the commitment, expertise and enthusiasm which have been offered in such a welcoming way by colleagues from the Faculty of Arts & Architecture at the University of Brighton; the Centre for Excellence in Teaching and Learning through Design (CETLD) and the Higher Education Academy Art, Design, Media Subject Centre (ADM-HEA). We are proud of the results of this fruitful collaboration, and the overwhelming response to our call for papers, as represented in this publication.

The Teachers' Academy has achieved an important place in the portfolio of ELIA activities, which also includes a Biennial Conference; a biennial Leadership Symposium; Thematic Networks and other EU projects addressing research and developments in Higher Arts Education.

ELIA is looking forward to starting work on the development of the next Teachers' Academy, building on the quality and experience of the Teachers' Academy in Brighton and on the continuous input of our membership.

The ELIA Teachers' Academy has become a successful tool in professional staff development for teachers and researchers within Higher Arts Education in Europe

INTRODUCTION

Anne Boddington
**Dean of the Faculty of Arts & Architecture, University of Brighton /
Director of the Centre for Excellence in Teaching & Learning
through Design**

On behalf of the Faculty of Arts & Architecture at the University of Brighton, the Higher Education Academy Subject Centre for Art, Design and Media (ADM HEA) and the Centre for Excellence in Teaching & Learning through Design (CETLD) we are delighted to welcome the ELIA Teachers Academy to Brighton. It has been a pleasure to work with ELIA and to develop what we hope will be a rich and exciting international programme of events that cover an extensive range of disciplines in Higher Arts Education.

This is the third Teachers' Academy and has been designed to stimulate discussions about the contested notions of creativity. The papers and workshops question and employ creativity in many different ways. Central to many is a discussion as to whether creativity is an inherent quality, a gift that cannot be taught or learned. Others discuss how creativity may be enhanced or stifled through changes to educational policy or structures, or equally, through theoretical and critical studies or the commercial realities of professional practice.

The papers are loosely divided into three strands that will run over the two days. The first examines the subject of creativity with reference to overarching themes including entrepreneurship, design management and professional practice, as well as through a number of different disciplinary fields. These papers explore the limitations and opportunities presented by different teaching scenarios and contexts both within and beyond the university. The second strand examines how teaching, learning and research methods and the instruments of evaluation, assessment and curriculum design may be used innovatively, reflectively and creatively to enhance student learning; and the third strand explores questions of creativity, diversity, disability and the implications and opportunities for teachers as well as their students to reflect upon their position in the context of Higher Arts Education.

Alongside the papers included in this publication, there are also a number of workshops and showcase presentations that are intended to encourage active participation as well as using the opportunity to discuss ideas and share experiences in an informal and inspiring environment.

We are also delighted to welcome a number of keynote speakers.

The Teachers Academy will be opened by the renowned scholar of crafts, design and cultural history, Professor Paul Greenhalgh, Director and President of Corcoran Gallery of Art and the Corcoran College of Art & Design in Washington DC. His presentation is entitled "Academies, Avant-Gardes and the Masses: The Myth and Reality of Art Education"

Paul's presentation will explore the relationship between the processes of teaching and learning in visual arts institutions, and the reality of practice in the visual arts in the normative social environment. It will initially examine the historic relationship between the 'academy' and the 'real world', during the period of formation of institutions of higher education in the visual arts, from the later nineteenth century to the Second World War, by looking at the mission statements of key institutions of art through the period, at curricula, at the way the arts were classified (art, craft, design, decorative art and so on), and at the ways in which institutions sought to explicitly affect the social and economic environment.

Following from this, the presentation will compare this earlier relationship between arts institutions and society to developments in Western art education over the last forty years. It will demonstrate that there was something of a paradigm shift during this period, which has seen, after 1980, a widespread return to a socio-economic agenda that is more redolent of the later nineteenth century than, say, the stated missions

of many art schools in the period 1960 -1980. A major contention will be that the way that histories have been constructed has inevitably affected the way that institutions have conducted teaching and research. Institutions configure themselves in response not only to where they believe they are going, but also, and more emphatically, on where they believe they have been. And in doing so, many of them have configured themselves around myth rather than reality. The presentation will close with some speculations on things to come in art education.

The first day will end 'in conversation with' the designer Wayne Hemmingway, co-founder of fashion label Red or Dead and HemingwayDesign. Wayne started his career at London's fashionable Camden Market, selling second-hand clothes. In 1982 he founded the Red or Dead fashion company with his wife Gerardine. An early boost by an order from the New York department store Macy's, and the company became famous for its footwear, especially its revival of Doc Marten boots. The couple's innovative approach saw their designs and stores spread quickly across the UK, then the world, winning them a host of industry accolades along the way. Wayne went on to win the prestigious Streetstyle Designer of the Year Award in three consecutive years and later became a cheeky tipster on breakfast television.

In 1999 after selling Red or Dead, he set up his own fashion consultancy, HemingwayDesign. HemingwayDesign broadened their portfolio to include work on various housing projects specialising in affordable and social design joining forces with the major building firm Wimpey.

The second day will open with a keynote presentation from Professor Karen Blincoe. Karen is a graphic designer from Denmark and presently Director of Schumacher College in Devon, a unique centre for studies in sustainability based on Ghandian principles.

Karen's presentation is entitled "There is Another Way: Traditional versus holistic and sustainable education in design"

Her presentation will explore case studies and examples that examine 'another way' of teaching design, based on alternative education methods and pedagogical principles. The rational, atomistic approach to teaching and learning more often than not destroys the human curiosity and ability to learn by doing. It ignores the inherent knowing embedded in our cells and disregards the fact that people learn in many different ways and at many different levels. The traditional approach is linear and chronological and has outlived its time. The traditional way of teaching and learning is limiting, hinders creativity and promotes a narrow-minded way of seeing, understanding and of making sense of the world.

For designers this means that with every problem they attempt to solve many more new problems arise with unpredictable and often serious impacts on our societies. Design solutions are often superficial and true creativity and originality is rare. The presentation will expand on these statements, explore holistic and sustainable teaching and learning methodologies and principles and examine the impact these could have on design education, design students, design practice and subsequently our societies.

For the close of the Teachers Academy we have organised a plenary discussion that will draw together ideas from the academy. Chaired by Professor Bruce Brown, Director of Research Development, the debate will be stimulated by a presentation by Dr Dragan Klaic from Belgrade. Dragan is a Permanent Fellow of Felix Meritis in Amsterdam and teaches arts and cultural policies at Leiden University. He is the initiator and Chair of the European Festival Research Project and active across Europe as writer, lecturer, researcher and advisor.

Dragan's presentation is entitled "Another

The third Teachers' Academy has been designed to stimulate discussions about the contested notions of creativity… and… whether creativity is an inherent quality, a gift that cannot be taught or learned

Learning is better than teaching because it is more intense: the more that is taught the less that can be learned

Crowded Bandwagon? From Divine Creation to Creative Industry". He will seek to dispel some of the conceptual fog around the notion of creativity and to probe it in relation to the transformation of the economies in Europe, prevailing artistic ideologies and shifting modes of cultural production. He will offer a critical look at the existing cultural infrastructure and its capacity to absorb and nurture creativity and will position creativity primarily as an ability to initiate, develop and enrich a range of productive relationships with partners and teams, institutions, funders, media, communities and cultural industry.

The plenary will draw together ideas that emerge from the papers presented and discussed during the academy, the workshop experiences and showcase presentations as well as from serendipitous discussions from the two days. We hope these will challenge notions of creativity and sustainability and how these are debated and tested within research, teaching and learning environments of Higher Arts Education. The plenary session will also explore further Josef Albers' reflections " that learning is better than teaching because it is more intense: the more that is taught the less that can be learned".

This Teachers Academy would not have been possible without the dedication and commitment from many teams of people. I would like to extend my thanks to all of them. They include staff at the ELIA offices in Amsterdam, especially Pam Ginzler, in

DAY 1

STRAND A1: Entrepreneurship, design and management

STRAND A2: Creativity-opportunities and barriers

STRAND A3: Research and shaping the curriculum

STRAND A1: INTRODUCTION: ENTREPRENEURSHIP, DESIGN AND MANAGEMENT

David Clews & Anne Boddington

The value of the creative economy was recognised in the UK through the regeneration of cities like Glasgow in the late 1980s (Landry, 1990) and the Department of Culture, Media and Sport (DCMS) *Creative Industry Mapping Document* (DCMS, 1998, 2001) which identified the creative industries as the fastest growing sector in UK and explicitly linked creativity with economic growth. In 2000, *Businessweek Online* declared: "The Industrial Economy is giving way to the Creative Economy." (Coy, 2000). And in 2005, James Purnell, then the DCMS Minister for Creative Industries declared that the UK was the "world's creative hub" (Purnell, 2005). Also in 2005 the UN Development and the International Forum on Creative Industries claimed the creative industries as one of the fastest growing sectors of the global economy and the DCMS creative industries 'map' has been adapted by the United Nations Conference on Trade and Development (UNCTAD, 2004) Panel on Creative Industries and has been adopted in countries in both the developed and developing worlds.

Recent reports including the DCMS Task Force on Further and Higher Education *Developing Entrepreneurship for the Creative Industries: The Role of Higher and Further Education* (DCMS, 2006) and the *Creating Entrepreneurship* (ADM-HEA, 2007) report have recorded the range of current delivery of entrepreneurship education in art, design and media higher education and the importance of further development of this for the future advancement of creative industries. The *Cox Review of Creativity* (Cox, 2006) urged industry and commerce to recognise that design graduates have creative skills that can enhance performance in all sectors.

Although the recognition of the economic importance of design and creativity may have arisen from harnessing creative and cultural enterprise as a catalyst for regeneration, the increasing focus on the role of creativity in management skills has also influenced thinking. In terms of learning creativity or learning for creativity there are over 50 definitions of creativity (Taylor, 1988). Four characteristics of the creative process were developed by Ken Robinson and the National Advisory Committee on Creative and Cultural Education of which the first is that "they always involve thinking or behaving imaginatively" (DfEE, 1999, p.29). Similarly Lubart and Sternberg (1995) established that there are six attributes that are required to support creative activity: and by 1999 they had refined these as knowledge, accompanied by intellectual ability, thinking style, personality, motivation and environment, all of which will be familiar to those who work in Higher Arts Education.

Since the late nineties there has been a specific focus on the subject of entrepreneurship from government departments and further action by governmental and non-governmental agencies seeking to enhance the entrepreneurial capacity of students and graduates. However, much of the attention to this for students in the creative arts, design and media, is narrowly focused and lacks relevance for those who are likely to work in the mainstream production activities in the creative industries. Policies have tended to focus on business start-up as the measure of entrepreneurship and have tended to emphasise role models and forms of behaviour that may be close to the media entertainment caricature of entrepreneurs but have little relevance in practice. As such they have tended to ignore entrepreneurial behaviours in public subsidy and not-for-profit sectors that are acknowledged by those such as Landry (1990)as key engines for economic regeneration.

In Alan Gibb's research for the UK National Council for Graduate Entrepreneurship (Gibb, 2006), he draws attention to the need for learning through

Kirby (2005) has suggested that entrepreneurial capacity is most effectively developed in social learning situations instead of through a more traditional model of service teaching provided from business schools

entrepreneurship education to be situated within the discipline and similarly David Kirby (2005) has suggested that entrepreneurial capacity is most effectively developed in social learning situations instead of through a more traditional model of service teaching provided from business schools. Positively, there is a shared view that collaboration between educational and commercial partners will deliver more effective occupational and professional practice skills, which is common across all stakeholders including academics, students and practitioners and policy makers.

In the first of a series of five papers presented in this session, Richard Chipps considers how barriers in the curriculum and in the perceptions of stakeholders can be overcome to deliver effective "live projects". Andy Penaluna discusses fit-for-purpose entrepreneurship education for design students delivered at the Swansea Institute - in particular how the business-school model of entrepreneurship education has been rejected in favour of pedagogies and curricula shaped to the needs of design students and the design industry. In a more broadly based paper Professor Marjo Mäenpää argues that creative actions cannot exist without a context and considers two case studies of trans- and interdisciplinary working showing how innovative concepts and ideas emerged from drawing together different disciplinary expertise to achieve a common purpose through dialogue and negotiation.

Bleetman's and Fitzpatrick's paper is an interesting challenge to placement learning as the most effective model to develop work-based competencies, suggesting that work placements may not be delivering and meeting expectations. Instead they propose an alternative that may more effectively and readily meet the proposed course through a controlled project-based solution.

Edel Moore's paper considers whether and how policies and structures of higher education, in particular the management structures, might stifle effective entrepreneurial education and creativity. Although Moore takes what she suggests as a "light-hearted look at this issue", the importance of this should not be lost. There is a growing body of evidence that suggests that quality assurance and the perceived bureaucratisation of higher education has had an impact through the use of complex educational aims and objectives that have become increasingly opaque to students, employers and to teaching staff.

This collection of papers addresses issues that are pressing for creative and performing arts and media education across the developed world. Despite their lead in creative and cultural enterprise it is increasingly clear that the developed world cannot compete within a global economy on labour costs and will need to prepare to enter into continuous cycles of creative innovation in order to sustain their creative economies within a global economy. A reflective response to these conditions within higher education for creative arts, design and media is essential if students are to be prepared for these changing conditions. This session will offer delegates the opportunity to explore how new initiatives, shaped to the needs of the disciplines, are being developed and tested. And this will be an opportunity to articulate how differentiated and meaningful learning experiences are sustained in a context of a widespread policy agenda that often assumes that one size fits all.

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EMBEDDING LIVE PROJECTS INTO THE DESIGN MANAGEMENT CURRICULUM: IS IT WORTH THE EFFORT?

Richard Chipps, De Montfort University, Leicester, UK

Abstract

Live projects with industry are seen by Design Management and Innovation (DM&I) De Montfort University, Leicester, as opportunities to enhance our student experience and employability. However, embedding these has been challenging and two hurdles had to be overcome, curricular and the clients themselves. Recently a number of curriculum reviews and a revalidation have enabled DM&I to overcome these obstacles. As a consequence the course has developed a reputation for bringing students and businesses together. It is hoped that our experience will enable other institutions to benefit from the opportunities that live projects provide.

Questions

- What is the primary function of live projects, is it to ensure the students' understanding of the subject matter or to increase the students' employability?
- Would a broader exploration of the subject matter be more beneficial to the students than spending so much time on a project that is constrained by the limitations of industry?
- How do you measure the success of your projects? Is it purely on client approval, and if so how do you manage the disappointment of students who may receive a client's accolade yet not gain the highest academic grade?

Key words

Live student projects, flexible curriculum, managing live projects, student employability.

Introduction

When joining the Design Management and Innovation (DM&I) course at De Montfort University, Leicester, from industry, it was apparent that the course had developed a number of good industrial relationships. DM&I was regularly approached by businesses with possible collaborative projects that were clearly opportunities for the course to enhance our students' experience. However, embedding these into an inflexible modular structure proved to be a challenging task and to achieve this two hurdles had to be overcome: the first curricular, the second managing the clients themselves. Since the 1990s a number of curriculum reviews and a revalidation have enabled DM&I to overcome these obstacles. It is hoped that our experience will enable other institutions to benefit from the opportunities that live projects provide.

Adopting a flexible curriculum

DM&I has adopted an open flexible structure particularly in the level-three studies, which consist of four modules – two of 24 weeks and two of 12 weeks – which run consecutively, Competitive Projects and Live Briefs, that are designed to accommodate either short or year-long projects. The nature of the student deliverables is left open to negotiation between staff and client. But assessment criteria and learning outcomes are fixed, although written in generic terms.

As a consequence the course has developed a reputation for bringing students and businesses together. DM&I has worked successfully with companies including Next, Leicester Tigers RFC, Belvoir Castle, catering firm PoBoys and many others, and in doing so meets a key outcome of the Cox Review (2005). **SEE FIGS. 1 AND 2**

What can DM&I offer to its clients?

Clients have an understanding of what students do on traditional design courses, but DM&I is not traditional, since the discipline focuses on research, process and strategy, rather than design outcome alone. As clients often don't know what design managers are, it is not

immediately obvious how our students' skills fit their needs. Therefore our discussions have to start with explaining how process and strategy contributes to the development of a successful design solution and how we can meet their requirements.

What do businesses want from working with students?

Some companies simply want cheap design, however, such businesses are quickly put off when told the copyright of the work is held by the University, and that a prize is expected for work adopted. The majority, however, believe that working with students in a creative and unconstrained environment will benefit their business. However, it is not an easy option for them, since the course expects as a minimum engagement an initial client briefing and review of the final presentation and student feedback. Yet the more engagement, through meetings, trips, visits and the like, the greater the benefit. The relationship is further enhanced by our Virtual Learning Environment which links client and student via the web. Our clients have said that they find the whole experience a refreshing change, a new challenge, and that it gets them out of the office. But many benefit in other ways. One of our clients found that the challenge of setting a formal brief had forced her to review the original project parameters, and provided a valuable opportunity for reflection.

Managing time and expectations

Timescales in business and academia might seem incompatible, because for the former 'yesterday is too late'. Therein lies potential conflict, but if clients have a genuine interest in working with students they have to be flexible, and most are. Our experience is that clients generally have unrealistic expectations of students in both positive and negative terms. To manage this, clients are shown examples of students work early on in the process - not in order to undersell the students, but to ensure that clients have realistic expectations. Following this stage, students accompanied by staff hold client meetings, which often raise challenging questions. One client when asked 'what is your company logo?' had to resort to pulling different types of headed paper from drawers, explaining which logo was used in which situation. They had never taken time to consider their corporate identity materials all in one go. Another, as a consequence of the discussions, sold its premises and reinvented itself. SEE FIG. 2.

Mediating risk

In our experience, the risks of working with live projects fall into three categories:

- Client engagement: the client does not engage fully with the project, and business pressures get in the way. Although this is disappointing, the students can generally independently achieve a successful outcome.
- Quality of student work: it is suggested to clients that they should be prepared to get nothing out of the exercise, and this they have to accept. So far, effective management of the relationships has ensured that no client has been disappointed. The work may not have been adopted but many are delighted with the quality, challenge and innovation demonstrated.
- Student commitment: some students will not grasp the opportunity, fail to engage and take it seriously, but the disappointment with the few is outweighed by the engagement of the many.

One student said that she felt the client had placed the responsibility for the project on her and that made her feel important to herself and others, and that consequently she wanted to do the best she could.

Dress Codes: a collaboration with Leicester Museums Service

In 2006 DM&I was approached by Leicester Museums Service. Their project Dress Codes was the most challenging yet undertaken by DM&I. Dress Codes was a workshop-based celebration of cultural diversity, run by the Museums Service. Our brief required that these workshops, across a dozen locations over a four-month period, were recorded photographically and on video. On first inspection the project seemed to be way beyond the capability of our students. But we rose to the challenge.

The discussion with the client began by exploring the project scope and it was agreed that it fell into two areas of activity:
• Phase 1: process and strategy
• Phase 2: image capture and production.

The brief was therefore expanded to include these two phases and the film outcome. However, attempting this project required a cross-faculty collaboration between Photography and Video (PHVP) and DM&I, and the need to break down an embedded 'silo attitude' to modularity. The PHVP and DM&I staff decided that the way forward was to work with collaborative teams of 2nd year PHVP students, and 3rd year DM&I students. Ensuring parity of assessment across courses and levels was an early concern as the 3rd year students' results would directly affect degree classification, while the 2nd years would not. To ensure fairness, the two groups of students would submit their work independently to their own subject area, and so the commitment of level 2 would not directly affect level 3 and vice versa. The strategy worked effectively with both groups benefiting from the collaboration while having confidence in their assessment independence. One student commented that it was good to learn not to be precious about her own ideas and to respect that others might know better.

Term one saw teams of DM&I students liaising with the client and planning and scheduling the tasks, while PHVP students worked on another project. Term one culminated in DM&I students formally briefing the PHVP students. In term two, PHVP students

FIG. 3: LIVE STUDENT PROJECT 2007 (USED WITH PERMISSION FROM IMPRESS AND BRITISH AEROSOL MANUFACTURES ASSOCIATION BAMA).

handled the capture and production of the film with design managers taking a supportive role, organising logistics, visits, and health and safety issues. To mark the completion of the project and the students' achievement, a gala presentation of all 20 films was held at the Phoenix Theatre, and awards were presented by the client to the students.

For the DM&I year-three students, the live project has become a watershed, where they move from being reactive to proactive and begin to gain their independence. One level-three student commented that if it had not been for this project she would have struggled to identify the relevance to industry of what she had learnt. **SEE FIG. 3**

The benefits of live projects

Live projects require students to apply the course learning outcomes including team working, communication, design understanding, design leadership and personnel management (Cooper, 2002). One student said that Dress Codes in particular had prepared her for the real challenges she now finds in industry, especially in terms of their interpersonal, written and visual communications skills gained through engagement with museum staff, the general public and young people. A graduate now employed by Greenwood Airvac agreed that the ability to communicate effectively was a key outcome and had helped her secure her current position. She believed that when students can demonstrate to a potential employer the ability to apply their

skills, beyond the context of the university, then the theoretical becomes practical.

This view is supported by Adam Grey, an employer, who had previously found that while students can talk fluently about the practice of design, they often have no real experience to back it up. So he felt the provision of a course that educates in a realistic way definitely gives the students an advantage. Live projects have an added benefit for DM&I, they ensure we meet a key requirement of the faculty's academic progression model: the need for students to 'refine tools and techniques for future employment'. Anil Nataly commented that as an employer, live projects help students manage the uncertainty of the design industry. This was true for Dress Codes and demonstrated that clients' ideas are often loose, and the design manager's role is to clarify their needs and wants.

Early in the project the students spent time defining the client's requirements and the extent of the project. To help them the analogy of 'eating an elephant' was used to explain the need to tackle the project in small bite-sized pieces. Dress Codes taught the students that, unlike the theoretical design models, projects do not move smoothly from brief to completion: ideas change, goal posts move, meetings are cancelled, appointments are missed, projects are uncertain. The students successfully managed this uncertainty and the challenges it presents. Adam Grey believed that it was important that DM&I had developed a curriculum that educated design managers in a realistic way. However, he felt that live projects in education can only provide a 'reflection' of industry, but that any experience is better than no experience.

An unexpected outcome of these live projects has been the engagement of students who found the usual lecture/seminar formula disengaging. Live projects provide the opportunity for trips, visits and meetings where students actively explore their studies outside the classroom setting. Crystal was a good example, a student whose kinaesthetic learning style responded very positively to this hands-on approach. She said: "The days out were fantastic and gave a break from the routine classroom environment… it provided me with a practical demonstration of what the design industry demands." Live projects add interest and can help to engage students with a wide variety of learning styles.

Conclusions and recommendation

The adoption of the live project within the DM&I curriculum has a positive influence on our graduate employment in a very competitive sector in which students can fall into the trap of "no experience no job - no job no experience" (Bessant and Whyte, 2007). Comments from clients and students alike confirm that working with businesses provides DM&I students with an added value, this increase in student employability is reflected in our employment statistics. A graduate from 2006 commented: "Working on live projects during my degree really prepared me for working in a professional environment…' The benefits are not only for students, live projects also provide a refreshing change for staff. Based on our experience, DM&I would encourage tutors to take every opportunity to engage in live projects in which both staff and students can have a rewarding experience.

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DRAWING PARALLELS:
DESIGN PEDAGOGIES AND ENTREPRENEURSHIP EDUCATION

Andy Penaluna, Swansea Institute of Higher Education, UK

Background

In July 2005 the first of four international papers that considered the findings of five years of research was delivered to the Internationalising Enterprise Education Conference (IntEnt). In November of that year the Cox Review (Cox, 2005) and DTI Paper No. 15 (DTI, 2005) were published. These added impetus to the approaches discussed – that of design leading business strategies to gain competitive advantage. Subsequently, the Cox Review and its implications for Entrepreneurship Education were discussed in a paper delivered to the Institute for Small Business and Entrepreneurship's International Conference during the summer of 2006 (Penaluna and Penaluna, 2006b), and more recently with Sir George Cox personally.

The studies were grounded in over 20 years' experience of teaching enterprise in the Visual Communication courses at Swansea Institute. Initially termed Business Studies or Professional Practice, these classes were not driven by Business School staff (as evidence suggests was the norm elsewhere if the subject was considered) but by practising design and illustration professionals who wished their students to have enhanced opportunities after graduating. Business professionals were involved at appropriate junctures and, importantly, the advice of alumni and their extended network of professionals actively informed the curriculum. Students are introduced to industry- and business-based procedures such as costing and estimating and viability of ideas for business in their second year of study. This embedded approach ensures that professional considerations become a seamless element of design procedure and practice.

The decision to formally initiate the research coincided with the appointment of a former bank manager as Enterprise Tutor in the Professional Studies Module. Accepting that traditional business school pedagogies of 'entrepreneurship' education were inappropriate for the sector (Raffo et al, 2000), various 'enabling' strategies were designed and implemented to help motivate students to engage with such studies and support them in the exploitation/commercialisation of their creative endeavour. Consequently, this business professional was mentored by a design creative on delivery strategies and techniques. Taken in the context of advice from alumni, appropriate adjustments and modifications are constantly made to the programme in a continuous review of process (Penaluna and Penaluna, 2006a). This integration of alumni is seen as a major success and in a final-year module, Marketing and Self Promotion, content is derived from ongoing student feedback, ie past students' opinions and views drive the delivery.

In order to facilitate the presentation of papers that discussed entrepreneurship education, a comprehensive review of literature was undertaken and key international conferences attended. The authors have fully engaged with the international entrepreneurship education community and drawn the conclusion that design and entrepreneurship pedagogies have much in common.

Entrepreneurs… have to be quick learners, seeking out information to assist their endeavours as and when it is required

Design students are used to working to briefs that constantly extend and challenge their own knowledge

Observations

It was noted during the research process that a number of consistent points arose when comparisons were drawn between the two disciplines, ones that are frequently cited as being key to success.

Entrepreneurs, for example, have to be quick learners, seeking out information to assist their endeavours as and when it is required. This results in "learning cycles" (Kolb, 1984, in Kirby, 2003, p.4) where reflection follows practice. Very much following the constructivist paradigms of research, theory evolves from practical experiment and experience. Many lecturing styles, in contrast, rely on the transmission of information and theory as a precursor to further work. In art and design, however, 'experiential learning' through projects and exercises is common practice. Moreover, most business lecturing styles develop left-brain cortex and capacity, ie students, in order to pass examinations and assessments, look to validate their work with rules and quotation of 'facts' from authoritative figures.

Conversely right-brain development, such as that found in art and design education, enables students to challenge ideas and concepts. They don't always accept the 'norms' that they are offered. This is widely accepted as an essential trait in the successful entrepreneur. As our students learn to challenge and question they rarely take things at face value, so they are well equipped to innovate. Specifically, design students are used to working to briefs that constantly extend and challenge their own knowledge. Although very specific criteria often have to be met in order to meet a production requirement or functional outcome, lecturers in the subject are well versed in developing a wide range of students' ideas and concepts. Frequently as practitioners as well as educators, we also lead by example; this in itself is considered to be a very entrepreneurial activity.

As design educators we often applaud brave attempts by students that don't quite work out, but exhibit a quality of process that will put the student in good stead for further work. The Art and Design Subject Benchmark Statements (QAA, 2002) require us to: "Anticipate and accommodate change, and work within the contexts of ambiguity, uncertainty, and unfamiliarity". Clearly, linear approaches would not satisfy this requirement. In an enterprising business where even short-term targets have to be adjusted and the goalposts are constantly moving, this is an important attribute. In the words of William A. Sahlman, an eminent Professor at Harvard Business School: "Good business plans discuss people, opportunity, and context as a moving target." (Sahlman, 1999, p.43).

Retaining a sense of ownership of one's work is considered to be important. Portfolios and exhibitions being an integral part of the design student's experience, this factor is implicit. It is something we nurture throughout our programmes of study, yet sometimes this personal contribution to a project is often the most contentious aspect of assessment. As lecturers we cannot forecast the outcome of a project precisely, as that would kill the very creativity that we are trying to develop. The unpredictable nature of this strategy is something that business educators struggle to grasp; yet it is central to entrepreneurial development.

A comprehensive understanding of intellectual property rights is an aspect that is receiving significant international attention as it is perceived to be an important aspect of competitive advantage. Most designer/makers are aware of this aspect of their work, though research indicates a fragmented approach at best when teaching the subject is discussed. Clearly this is one aspect that needs further investigation, though the anticipation is that

it must become a more integral part of design-led pedagogies (NESTA, 2006).

The need to be continuously challenged is frequently cited by eminent entrepreneurship professors such as David Kirby (2003) and Allan Gibb (2005) as critical to entrepreneurial development. This need for constant challenge is understood in the world of design, together with the development of a mind set that has the confidence to meet such challenges head on.

Team working and networking capacity are also cited as being important. Most design courses consider the broader team and links with other professionals in an integrated way. The product designer will consider the manufacturing limitations and required expertise, the graphic designer the print process and web interface. This, coupled with the fact that most design courses run team activities and projects, once again mirrors the requirements of the enterprising business environment.

As designers are taught to respond within constraints set by others, aspects of marketing are integral to the process. What is the demographic of the target audience for example? What are the implications of cost? How will the design function in physical terms when responding to the client's needs? As designer Paul Rand observed, they are "like a juggler", balancing the demands of personal creative endeavour with the constraints and demands of a client brief.

In contrast, business-school paradigms continue to develop theoretical understanding through observational activities such as case studies. They rarely develop experiential learning activities such as role-play within specified scenarios. It is acknowledged that entrepreneurship professors "seldom concern themselves with several instructional methods to cater for different types of students" (Fregetto, 2006), hence the emergent strategies

discussed here are slow in gaining momentum, despite government and other initiatives that advocate the approach to industry. Sir George Cox calls for creativity to pervade business in order to ensure economical success; he feels that it "needs to be an integral part of learning" (Cox, 2005, p.28) and Allan Gibb (2005, p.2) concedes that business schools compartmentalise information into artificial boxes that "dictate the organisation… and consequently the delivery of knowledge and the value they give to it".

International and government-led discussion (Brown, 2005) confirms that businesses are starting to look towards design for solutions. At the UK's Competitiveness Summit in December 2006, Professor Stuart MacDonald, the Head of Grey's School of Art and Design in Aberdeen, suggested that business needs a change of mentality, with design as the connective tissue.

However, the relationship between art and business is frequently observed as problematic - with comments such as "they don't always know what they want" being fairly common in discussions on the subject (Shaughnessy, 2005).

Conclusion

This paper argues that the tensions between business and art are bridged by the skills of the designer and that good design-led programmes of study have much in common with the entrepreneurship agenda. Moreover, the pedagogies employed could well benefit other disciplines, having much to offer by way of good practice (Kellet, 2006). Bringing the same observations to bear on the University sector is becoming increasingly urgent (Keep British Design Alive, 2007).

Accordingly, and with the intention to stimulate interdisciplinary debate, the authors have prepared two complementary and parallel papers. The first

Business needs a change of mentality, with design as the connective tissue

paper was delivered to the UK Higher Education Academy's Business Management and Finance Conference in May 2007. This second paper engages the art and design community of practice and is intended to trigger a complementary debate, one that will hopefully offer greater insights and enable us to realise the potential for advancement.

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CREATIVE ENVIRONMENTS IN DESIGN TEACHING AND RESEARCH

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Abstract

Creativity cannot exist without any context. The paper presents two cases of the University of Art and Design, where different fields of knowledge were put to work together. In the first case students of digital media and textile design were asked to produce common concepts for intelligent textiles. In the second case a multidisciplinary research group from Turku School of Economics and University of Art and Design aims to find models for the creative leadership. In both cases the multidisciplinary groups aimed to create innovative products, and in both cases the collaboration was complicated.

Question

How can the creativity in interdisciplinary studies be managed?

Key words

Creativity, design research, design studies, media studies, innovative environment, cross-discipline research, multidisciplinary research, confidence, knowledge management

Introduction
Creativity and interdisciplinary groups

Creativity cannot exist without any context. If the context is interdisciplinary processes, creativity needs an environment with confident and open dialogue. Design processes often benefit from the collaboration of people with knowledge of different fields - media production, for example, requires various different professional skills. Design students now are likely to end up working in multidisciplinary groups in creative industry.

According to one definition, creative thinking is the process of merging thought categories, or mental images, either across or within domains, in ways that have not been done before, in order to develop original and appropriate solutions to a situation or a problem (Kilgour, 2007, p.17). While Ettlie defines creativity as nothing more than going beyond the current boundaries, whether these boundaries are technology, knowledge, social norms or beliefs (Ettlie, 2006, p.55).

I will present two case studies from the University of Art and Design, Helsinki, where different fields of knowledge were put to work in an innovative environment. The cases are different in many ways. In the first case, in two workshops, students of digital media and textile design were asked to produce common concepts for functional and intelligent textiles (Hailahti and Mäenpää, 2005, 2006). The second case concerns the work of the multidisciplinary research group of Turku School of Economics and University of Art and Design. The group aims to find models for creative leadership and to utilise new economy in media and culture productions and design. In both cases the multidisciplinary groups aimed to create innovative products, and in both cases the collaboration was complicated.

The term 'interdisciplinary' is used when researchers from two or more disciplines pool their approaches and modify them so that they are better qualified to solve the problem at hand – as with the Creative Leadership project. Interdisciplinarity appears also in the designers' workshops, where students were required to understand how a given subject may appear differently when examined by different disciplines.

I will focus on the problem of how the creativity in interdisciplinary studies can be managed and evaluated. I was interested in documenting the process of creating an innovative atmosphere. For me it was important to see how individuals from different disciplines and with a wide variety of working methods can solve common problems.

User-centred design urges cross-discipline working

Case study: Functional Design and Co-Design Workshops

Functional Design and Co-Design Workshops were organised during the Fall 2005 and Spring 2006 semesters by the School of Design (for the students of MA Textile Design) and by the School of New Media (for the students of MA New Media). Even though these schools and students work and study in the same University of Art and Design they had never worked together before. The aim of this workshop was to produce concepts for functional textiles with intelligent digital technology. Designing digital services and products for wide user groups requires innovative unprejudiced methods. Creative people mix old skills in a new way, and in education and research change the context of studies to a new field.

These workshops indicated how important it is to create an open environment. Students need to have enough time to get to know each other, and they have to be aware of what knowledge they are expected to produce. In a first group assignment, students were put together to collect different types of user information. In a user-centred design process this information may have different weightings. For example, to produce a concept of an interactive product, designers must have an understanding of the situations and phases of use. The design process urges several perspectives: technological understanding, ergonomics, usability, aesthetics, semantics, social factors, pleasure of use, personality, pleasure of social status, usability of IST-product, ergonomics of furniture (Jääskö et al, 2006, p.93), and of course a good understanding of how to produce intelligent clothes and functional textiles.

Students were given a definite task and problem to solve: they had to make a concept to satisfy a real need. The Functional Design workshop started with brainstorming and lectures given by experts in intelligent textile design, multimodal design, interactive design and mobile technologies. The emphasis was put on the user experience and principles of design for all. The aim was to create scenarios and applications for forthcoming design projects and possibilities for commercialising the innovations with SME partners.

User-centred design has been defined as an activity in which the actual user participates in the design process right from the beginning. Users' activities are examined in the physical and social environments for which the product is intended (Jääskö et al, 2006, p.93). Design driven by user information must participate in an iterative process in which the goals are adjusted on the basis of user feedback (ibid). In the workshop, students first used each other as the end users to trial the products. In the first phase (Fall 2005) they made up scenarios for functional and intelligent textiles. Already students were intent on combining their knowledge of textile design, weaving, programming multimedia and designing sensors for multimodal interfaces. Students produced creative solutions where new technology and techniques of weaving of electronic materials were needed. They came up with concepts such as socks and shirts that tell their user when it's time to wash them, curtains that warn older people if they forget to switch the oven off, and even a teddy bear that changes its colour when another teddy bear of the same model comes near.

In the subsequent Co-Design workshop (Spring 2006), students were asked to collect user information from real end users. The new aim was to encourage kids to be more active by designing motivating devices for their everyday life. The workshop included a group of 11-year-old elementary school pupils who gave their opinions. Through user studies and observation, students obtained new

Understanding and knowledge in a research network is created only if the members of it are willing to collaborate and share knowledge
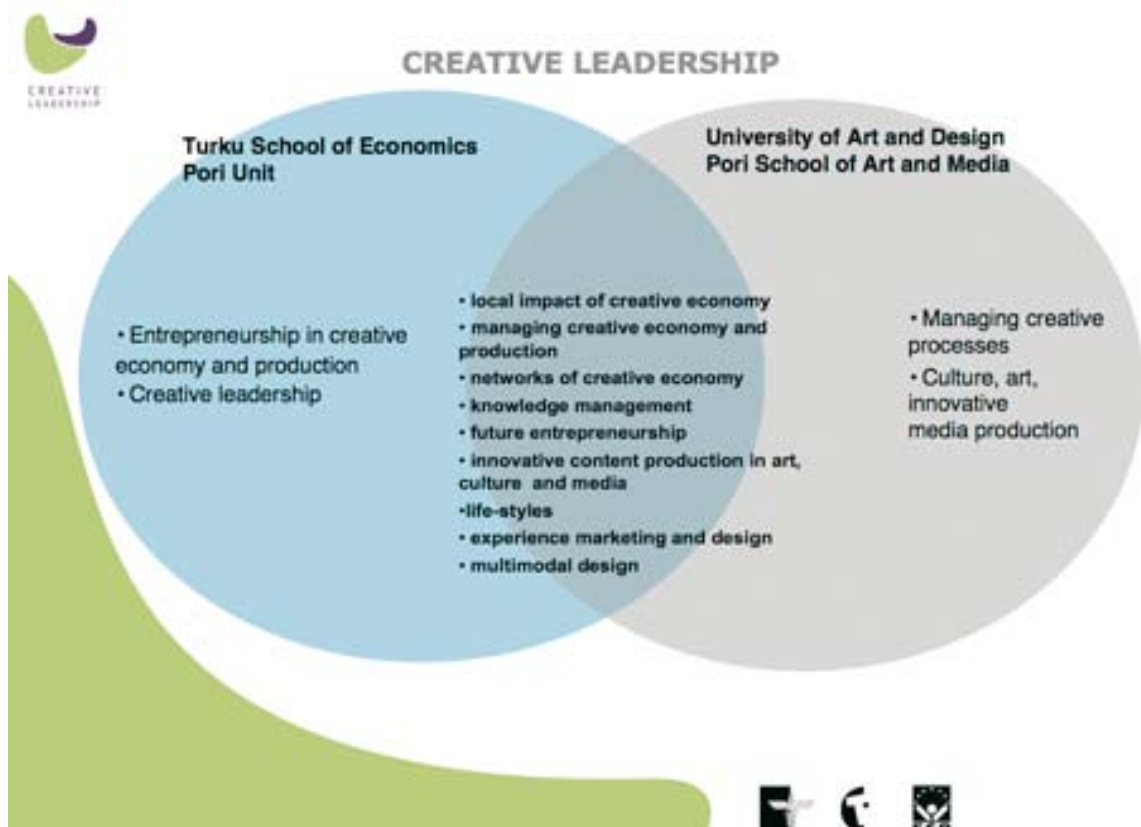
FIG. 1: CROSS-DISCIPLINARY AREA OF CREATIVE LEADERSHIP PROJECT. THE AIM IS TO SUPPLEMENT OR IMPROVE EVERYONE'S EDUCATION AND EXPERIENCE BY BRINGING TOGETHER DIFFERENT DISCIPLINES.

information. Sometimes the process of observing users may reveal product improvement ideas that can be applied directly to subsequent product versions, even though the original focus was to develop concepts for the more distant future. (Jääskö et al, 2006, p.93). This time the aim was to produce prototypes out of concepts. By being able to get close to the user, students gained insight into the way 11-year-old pupils think, what their values are and what their physical environment is like. Students produced prototypes of an intelligent wristband that encourages kids to move and play, and models of intelligent clothes that send messages and communicate with each other when children are playing.

In both workshops, the task and learning objectives were planned so that for solving the problem, students had all the knowledge needed. They were forced to trust each other and share their knowledge. The teachers' main task was to motivate the groups. The most important and challenging thing was to show respect to each other's discipline: "nerds" and "viewers" found areas where they can really learn something from each other.

Interdisciplinary research needs autonomy
Case study: Creative Leadership research project

Interdisciplinary programmes sometimes arise from a shared conviction that traditional disciplines are unable or unwilling to address an important problem. Interdisciplinarity is the act of drawing from two or more academic disciplines and integrating their insights to work together in pursuit of a common goal. The idea of gathering an interdisciplinary research group and designing an MA programme studying the leadership of creative processes, arose in the University Consortium of Pori in Fall 2006.

It was important to see how individuals from different disciplines and with a wide variety of working methods can solve common problems

The consortium is a combination of five different Finnish universities that have separate units in Pori, a city 250 km from Helsinki. Units from Turku School of Economics, University of Turku, University of Tampere, Technical University of Tampere and University of Art and Design, Helsinki are all located in the city's old cotton factory. The consortium is an innovative combination of the disciplines of technology and economy, as well as cultural, sociological and art studies.

Creative Leadership is a joint effort between the Turku School of Economics, Pori Unit and the University of Art and Design, Pori School of Art and Media. The project is funded by the EU, local authorities and the city of Pori. The research group recruited is multidisciplinary – three employees represent design research and art and media management studies and four have backgrounds in economics and business.

The aim of the project is to produce a permanent MA programme that utilises knowledge from the design and economics faculties to train experts in managing innovative, creative processes. The research project is operating as a pilot and brings a theoretical background to the MA studies. Another emphasis of the current research is to create close contacts with local creative industry. This is not only from the point of view of finding jobs for graduates, but also to ask local entrepreneurs what courses and skills they would find useful for current or future employees. **SEE FIG. 1**

Working in a collaborative environment is inspiring, although finding the common methods, language and practices to bring together design researchers and economists is sometimes difficult. The Creative Leadership project is still very much work in progress. So far the most complicated question is how to combine the qualitative and quantitative objectives of the project.

Creative Leadership is lead by two universities that have very different methodological and scientific backgrounds. Right from the start it was obvious that both universities would have to give space and independence to the research group. Interdisciplinary research cannot succeed if the research group doesn't have free, open space for work and knowledge sharing. The first results of the research done in the group will be presented during Fall 2007.

Interdisciplinary work feeds creativity

What do interdisciplinary groups need to become innovative? These two cases illustrated that in order to creating innovations, the working environment needs to be flexible enough. A shared intent and joint learning help research and study groups to bring out their creative potential (Aldrea-Partanen and Ponnnikas, 2007, p.94). The most difficult task in these two case studies was to find a common culture for work and study. In the first case, in workshops for design students the flexible atmosphere was relatively easy to reach by giving students carefully defined tasks and motivating them to complete them. However, it was necessary to plan the tasks so that there was space for everyone's expertise to be useful.

In the research project, finding common creative working methods has been more difficult. It doesn't matter how creative and innovative the research group is if the organisations leading the project don't allow opportunities for flexible and self-reliant work. Interdisciplinary programs may well fail if they are not given sufficient autonomy. If the traditional discipline makes the tenure decisions, the new interdisciplinary faculty will be hesitant to commit themselves fully to interdisciplinary work.

From the viewpoint of working culture, it was obvious that understanding and knowledge in a research network is created only if the members of it are willing to collaborate and share knowledge. For collaboration and sharing to take place in a network requires openness, mutual trust, willingness and commitment to share. Such a network can be identified for each community of practice (Still, 2007, p.73). The overall atmosphere of risk-taking and a certain level of informality are seen as enablers of knowledge creation as well as creative interdisciplinary collaboration.

The different cultures of practice create both barriers and opportunities to mutual sharing of knowledge. In the Creative Leadership project, for example, the matters of methods, language and meaning have to go through a translation process to be understood and used in the common interdisciplinary field. (Lets take for example the word 'value' and its meaning to designers and economists. In a design process, value comes from ecological, aesthetic, ergonomic and accessibility factors. While from an economist's point of view, they are more interested in exchange value or trade-in value.)

According to Kilgour, one prominent line of reasoning regarding the creative thinking process is the development of original and appropriate ideas. However, this then requires some type of recombination process (Kilgour, 2007, p.16). Ideas may be created by individuals, but groups and teams mould new ideas into innovative products and services.

By being able to get close to the user, students gained insight into the way 11-year-old pupils think

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PLACEMENTS AND PROJECTS: WHERE IS THE EXTRA VALUE FOR STUDENTS?

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Abstract

There is a generally held belief that placements add value to a student's experience at university, with some evidence that they help students to gain employment on graduation (Harvey and Blackwell, 1999) -- although this may now be out of date. Where placements cannot be found for all students, or where placements are not suitable, universities offer a project-based alternative. This was traditionally viewed as a less valuable experience for the student. However, changes in workplace culture and in the career paths of graduates may support the argument that projects offered by live clients, encouraging students to work independently, may be of similar, or even more, value than traditional placements for Art and Design students.

Questions:

- Do we need to reconsider the use of placements for learning in Art and Design?
- What will the career paths of our graduates look like, and how can we best help them to prepare for the future?
- What does employability mean for Art and Design graduates – can we define it?

Key Words

Art and design , placements, professional experience, work-based learning, placements and projects, employability, graduate skills.

Introduction

There is a generally held belief that placements add value to a student's experience at university (Blackwell, Harvey et al, 2000). Placements are perceived to enhance the students' understanding of the industry into which they will enter when they graduate. There is some evidence that they help students to gain employment on graduation (Blackwell and Harvey, 1999), although this may now be out of date.

One alternative to a placement is a university-based project. This has generally been held in lower esteem by staff and students, and was seen as the lesser alternative. Over the past three years we have asked final-year students to list the skills that they have acquired while undertaking either a placement or a project in the second year. The evidence shows that the skills are the same, regardless of the type of professional experience undertaken. Does this mean that placements have been overvalued, that the experiences of placement are changing or that the skills learned have changed? We question the value of placements in a changing economic environment and ask whether they are still of benefit to our students.

Background

Some art and design courses are promoted with the unique selling point that they include placements, either as a sandwich year or as a short module. Coventry University School of Art and Design is one of these. Our

It is the contact with the external world that enhances (students') awareness of their learning
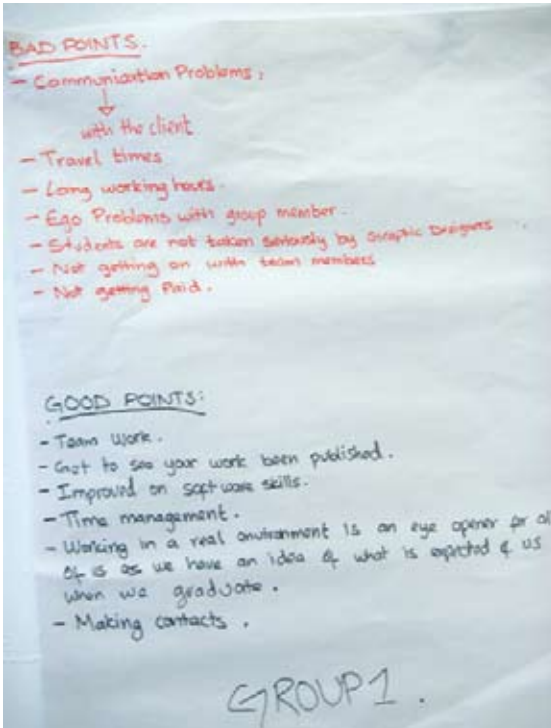
FIG. 1

FIGS. 2

Graphic Design, Media Production, Transport Design and Communication Culture and Media courses all boast a 10-20 week professional experience module.

Over the past seven years there has been a decline in the number of placements available for students in art and design (across the university and the sector). The economic climate of the early 21st century is different to that of the early 1990s. Many large companies have restructured, outsourced and downsized. In-house publications and graphic design departments have not been resurrected in this new climate. Consequently many art and design graduates in industry are either self-employed or working for small, specialist companies servicing the companies in which they were previously employed.

In our experience, this restructuring has provided for fewer student placements, shorter periods of employment and less opportunity for salaried experience. Anecdotal evidence also points to the increase in work-experience opportunities for school children as a factor in the decline of professional-experience opportunities for university students.

Students who do not, or cannot, take placement opportunities, are offered a comparable experience at the university – usually a set project.

At Coventry, the perception was generally held that placements were the preferred option, while projects were deemed second best. Over the past five years we have seen the balance of opportunities change in favour of the project. Module tutors responded by integrating the two modules so that students are now offered either a professional-experience module in which they take a professional placement or a university-based project, or a combination of the two. The projects tend to be based on a real brief. Module staff invite industry contacts to offer the students the opportunity to participate in a live brief. Students work in teams and often pitch their ideas to the client in a simulated competition for work.

There are other factors affecting this move from placements to projects:

• Students are now burdened with debt and most

The handwritten cards read:

- BEING OPEN TO CRITISISM.
- ALWAYS SAY IDEAS THAT ARE IN YOUR HEAD – NO IDEA IS A BAD IDEA. GREAT IDEAS DON'T COME FROM NOWHERE.
- • LACK OF CHALLENGE
  • OVERESTIMATED THE CLIENT
  • LACK OF CREATIVE FREEDOM
  • NOT ENOUGH WORK/CHALLENGE FOR A GROUP OF 5!
    OR
  • TOO MUCH WORK FOR ONE PERSON!
- You gain more from professional experience than a project.
  Placement :– Software experience
  Gives you an insight of the network
  Project:– need to motivate yourself
  Finance yourself in printing + travelling.
- • TIME MANAGEMENT
  • DISCIPLINE
  • GROUP DYNAMICS
  • SELF-ESTEEM
  • CONFIDENCE
  • PROFESSIONAL RELATIONSHIPS
  • SKILLS DEVELOPMENT
- Working professionally has creative limitations: client often be unclear and change what they want

FIG. 3

hold part-time employment in the local area which they are reluctant to give up for the duration of a placement away from Coventry.

- Students are tied into 10- or 12-month accommodation agreements which leave them bound to the university and unable to take up placement opportunities away from the local region.
- Local placements are in high demand and are few in number.
- Companies are less willing to devote resources and hours to supporting a university student on placement.

However we have found that smaller companies, while unable to take a placement student, are often willing to offer a live brief and a few hours of their time to assist the students.

Our experience

We were interested in finding out what students perceived that they had learned from the professional-experience modules and whether they found the two experiences (project and placement) to be comparable. There is a generally shared belief amongst staff and students that placements are of more value than projects, and that projects are the 'poor relation'.

The professional-experience modules in Graphic Design and Media Production run during the final term of the second year of study. Students returning for their third year of study participate in a module called Professional Futures in which they are asked to consider their own future and to look at the options for their future practice. The module starts by reviewing their experiences during the final term of the second year.

Each year group consists of approximately 90 Graphic Design students, 20 Communication Design students and 15 Media Production students. In randomly mixed groups, students are asked to each talk about their experience – placement or project. They are then asked to discuss with the group what they think they learned from the experience and to compare their experiences with their peers. They are

FIG. 4

asked to consider positive and negative outcomes from their experience. The results are written up on cards or A1 sheets and hung round the room for all to consider. Some examples are shown below. **SEE FIGS. 1-5**

Over the past three years there have been a number of recurring outcomes identified by the students.

Positive outcomes	Negative outcomes
time management	working with clients and having to accept their decisions
team working	travel
communication skills	periods of inactivity
self esteem/confidence/ seeing work in print or publication	long working days
networking	issues with team working/egos
learning presentation skills	

The skills that students perceive that they have learned tend to be generic in nature. These are skills that could be learned in most work environments, but which are enhanced by having been learned in a subject-specific environment. Most of our students hold part-time jobs while studying, yet they do not feel that these skills could have been learned from their part-time employment. In discussions with the students it is clear that they have a different attitude to their part-time work and do not consider it to be a relevant learning experience.

The development of the live brief as part of the module is an important factor in the similarity of the skills developed. Students are working with a client, following a given brief and perceive themselves to be working as professionals. While all students are supervised by a member of staff, it is the contact with the external world that enhances their awareness of their learning. This awareness is reinforced throughout this final-year module as external speakers are invited each week to talk to

FIG. 5

the students about their work and their career paths. The students find this more interesting, and relate to it much more than when the module content is delivered by the module leaders.

Where to from here?

Given the difficulties in finding work placements and the seemingly minimal educational and professional advantages over university-managed projects, we need to have an honest reappraisal of our approach to the professional development of our senior students.

With recent changes in the configuration of large businesses, more of our graduates are likely to develop careers as freelance sole traders or work in small businesses. This challenges the widely held view that professional placements are 'better' than university-managed projects. These live projects continue to provide a worthwhile experience for our students while being protected to a degree by university staff. This supported educational and professional environment is likely to be more akin to their future working

environment than a short, relatively unprotected industrial placement. Recent university initiatives to support budding entrepreneurs include the provision of financial support and guidance in setting up a small business. This promising development needs to be considered as another viable challenge to the conventional 'professional placement is best' dogma.

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DESIGN AND ENTERPRISE: INSTITUTIONAL IMPEDIMENTS TO A SYNERGETIC UNION

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Abstract

Do prevailing economic and bureaucratic pressures within education at best stifle design excellence or at their worst actively eradicate creative thought? In this paper the author documents the procedures, outcomes and difficulties involved in teaching a design enterprise module. It is hoped that this satirical review of the top five obstacles encountered, while striking a chord with many in the teaching profession, will also initiate a wider debate concerning the institutional requirements for creative-based enterprise and the validity of bureaucratic tensions that impede the natural synergy of design and entrepreneurship.

Questions

- What is the importance of entrepreneurial design-based activity?
- How can institutions encourage design students' entrepreneurial inclinations?
- How can the newly merging pedagogical areas of design and entrepreneurship be mapped?

Key words

Design, entrepreneurship, marketing, educational barriers, innovation, creativity, teaching practice.

Introduction

A cursory review of academic headlines would suggest that educational institutions can be perceived as formalised, regimented and systematic - academic factories that reward those, staff and students, who conform best to rigid systems that ensure the efficient processing of quantity. However, is this the reality of the situation? Do prevailing economic and bureaucratic-driven pressures at best stifle design excellence or at their worst actively eradicate the existence of design inclinations? The following paper asks the question: is there a place for the successful teaching and development of entrepreneurial-based design skills within the UK educational system. By documenting the procedures, outcomes and difficulties involved in teaching a design enterprise module, the discussion takes a light-hearted view of the difficulties encountered when trying to incorporate the dynamic entities of design and enterprise into a manageable teaching situation. It is hoped that while this will strike a chord with many in the teaching professionm it will also initiate a wider debate concerning the institutional requirements for creative enterprise and the validity of bureaucratic tensions that impede the natural synergy of design and entrepreneurship.

Design entrepreneurship

"The growing interdependency between Arts and Business requires disciplined thinking on the one side and the encouragement of curiosity, initiative, and originality on the other." Wildt, 2006.

The module Design Entrepreneurship is taken by 75 third-level students – 50 from Fashion-based programmes and 35 from Graphic Design. It takes place over two semesters and all students have previously obtained 80 credits in marketing. The module involves a practical project which requires students to research, devise, produce and present a professional marketing and promotional plan for an approved business concept. Students have to assess the marketplace and identify consumer dissatisfactions which they can convert into commercial solutions. It requires a holistic view of the design process and the creative development of solutions while encompassing areas such as commercialisation, implementation and communication. The definition of the business problem is left entirely to the student. This ensures that task formation becomes an integral part of the

FIGURE 1: Comparing the Creative Problem-Solving (CPS) Process with the Marketing Process
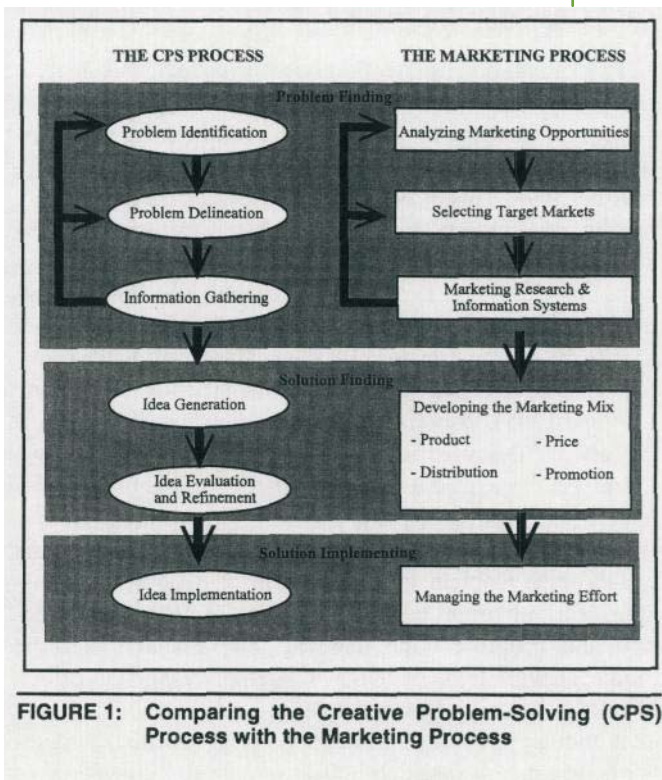
FIG. 1: THE CREATIVE PROBLEM-SOLVING PROCESS (TITUS, 2000).

project. The module is assessed through a formal marketing plan in week 11 worth 45%, a highly creative and visually based communication plan in week 22 worth 35% and a 15-minute verbal and visual presentation worth 25%.

The aim of the module is to allow students to develop their understanding of the scope of design-based enterprise by employing creative thinking to identify and solve customer-centred problems within commercial parameters. Within the module, Titus' (2000) view of creative problem solving is utilised (Fig. 1). This ensures that all elements from problem identification to solution presentation are incorporated. Jonassen (1999) also states that thinking skills such as creativity, decision making, problem solving, and knowledge reinforce each other rather than being either/or entities. Entrepreneurial creativity and design creativity from theoretical and practical perspectives are activities that seem to entail regulated, convergent thinking on the one hand and the encouragement of divergent and creative innovation on the other. A major issue for academics and academic institutions centres on the management of learning environments that accommodate both these approaches harmoniously. SEE FIG. 1.

Student output and feedback

As the formulation of the business problem is left entirely to the student, the concepts developed are highly diverse. Although there are a few students who stay within their chosen degree subject area, the majority seek commercial opportunities from a range of alternative service, non-profit making, community-based and product-innovation formats. One of the most unexpected results was the prevalence of concepts that were not manufacturing based, with at least 65% of projects emerging from service industries. Although the majority of their academic training focused on product issues the output more closely reflected the UK's current services/manufacturing breakdown. SEE FIG. 2

1.0 WHAT BUSINESS ARE WE IN?

FIG. 2: EXAMPLES OF STUDENT WORK

Reactions to the exercise

Based on qualitative feedback, the module was highly popular. With the most involved students appreciating the opportunity to put their business 'dreams' on paper. These 'real' projects also tend to achieve the highest grades. One of the issues that caused the most concern was the 15-minute presentation. Students spoke about visions of the BBC series Dragons' Den being conjured up. However, they appreciated that if they mastered the lecture-theatre situation it would help in future work situations. Not all feedback was positive as some students felt that the entrepreneurial aspect held no interest as they felt their careers would never follow this route. Some students also felt uncomfortable at the start, as the sense of ambiguity and openness of the task left them feeling lost. But this was alleviated through scheduled one-to-one sessions and as students took ownership of their project.
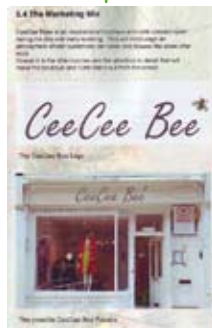
Institutional impediments

Although the importance of design has been widely acknowledged, a lack of emphasis on the nurturing of design talent has been observed in the classroom and workplace alike (McIntyre et al, 2003, Driver, 2001, McHardy and Allan, 2000). If one accepts the premise that design and enterprise can be taught, a belief not held by all, then it follows that educational emphasis should be given to increasing students' ability to enact a range of activities from problem identification to solution presentation in order to develop creative design solutions for existing and emerging tasks.

However, there are many stumbling blocks that if HE does not genuinely try to remove will at best minimise the propensity for students to develop their entrepreneurial design inclinations. Although it is highly subjective, the following satirical list highlights

the author's view of the top five impediments encountered when developing, conducting and assessing the module Design Entrepreneurship.

"Creativity implies an absence of sameness, security and predictability… Organisations by their very nature, tend to try to control activity, define roles and processes, and avoid mistakes." Lein, 1990.

1. Quantifiable ambiguity: "What's the word count?"

Both the governing body and the student cohort were perplexed that an exact formula for proportioning percentage marks to a quantifiable entity such as word count could only be roughly given. Although the holistic marking perspective and the premise that it required greater design creativity to sell the idea in 2,500 words as opposed to 3,500 was understood by students – after some debate – the university powers remained unpersuaded and a highly 'consistent' quantified method for marking was sent from on high.

2. Economies of scale: "Space costs"

After its first year, the module was allowed to be split from lectures consisting of 150 students with additional 'cafeteria' drop-in sessions, into two smaller lecture groups and scheduled one-to-one meetings. Although it was felt that this was still not the optimum interaction conducive to the generation of design capabilities, it was definitely an improvement. Within a Design School with its insatiable need for studio space, a module based on marketing is prized for its possible student-to-square-foot ratio. So trying to obtain a more realistic staff-to-student ratio to facilitate design entrepreneurship was met with nothing short of economic horror.

3. Pre-existing knowledge and fear of failure: "How can I get a First?"

The previous experience of the tutor, students and administration may have impacted on the true level of entrepreneurial activity. We have all been in the educational system for varying lengths of time and have a related multitude of objectives. So while the majority of our input aimed to produce truly creative outcomes, it was impossible to ignore issues such as achieving good marks, juggling other teaching/studying commitments, scoring points towards the Research Assessment Exercise, etc.

4. Organisational restriction: "OK everybody get entrepreneurial at 4 o'clock on a Friday."

For reasons that are too long to go into here, The Central Timetabling System at the university insisted the module could only be scheduled at 4 O'clock on a Friday. Although I understand that to true professionals time and location are irrelevant, I found that occasionally both the student cohort and I were more interested in exiting the session at this juncture in the week than engrossing ourselves in design enterprise. As I am the first to profess my own inadequacies this resulted in the students and I unanimously agreeing to move the lecture to Wednesday afternoons, even though this contravened the University "Access to Sports Policy".

5. Bureaucracy, bureaucracy, bureaucracy: "Can you sign the register please!"

As I do not want to add to the debate on the pros and cons of bureaucracy and the importance of form filling, I will just comment that these are an inevitable fact of academic life. However, even though I believe it goes against the fundamental autonomy of enterprise I have found that if loopholes are left, unfortunately a small minority of students may decide to contest poor marks received. Although enterprising problem solving is encouraged, such post-hoc creativity is not the purpose of the module, so I have devised forms for students to submit with work.

Conclusion: creative advantage

"Information may well be the currency of modern business, but ideas provide the seeds for its growth and prosperity. Businesses that consistently bring new and novel ideas to the market enjoy the rewards of significant growth and long-term profits." Titus, 2000.

Designers operate within dynamic environments that require constant creation of better and/or new solutions. The importance of this ability to develop innovative processes and outputs is discussed extensively within economic theory and is directly linked with the generation of competitive advantage at individual, organisational and national levels (Levitt, 1987, Titus, 2000, Cox, 2005). Design and entrepreneurship are complex constructs that

have numerous definitions depending on the field of study viewing it. But although there may not be one universally agreed definition, it is generally accepted that design and entrepreneurial activity are key competencies required by UK industry. (Fillis, 2005, Robertson and Collins, 2003).

If the importance of entrepreneurial design is not in question, then it is the responsibility of educational institutions to ensure that emphasis is given to the nurturing and development of design competencies. Nevertheless, it is not easy for institutions to make realistic commitments to developing creative affirming process and environments. Educational institutions are by their very nature bureaucratic hierarchies which employ formalised and systematic structures to meet the requirements of transparency and financial viability. Yet highly creative individuals, both staff and students, may not always survive organisational life as conformance to the structure may be at odds with the characteristics of the creative individual.

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STRAND A2: INTRODUCTION: CREATIVITY – OPPORTUNITIES AND BARRIERS

David Clews

Papers in this session will discuss the conditions that provoke and sustain learning for and learning through creativity and to what extent the creativity is shaped by the discipline or potentially challenged through the overlays of educational structures or economic imperatives.

Many definitions of creativity describe it as a way of thinking and practising, frequently referring to "divergent or lateral thinking; experimentation and risk-taking; tolerance of ambiguity; spontaneity; willingness to push boundaries; exploring the unfamiliar; learning from mistakes; and other ways of thinking and practising" (Buss, 2007). While in 1988 Calvin Taylor identified over 50 definitions of creativity, by 1999 Ken Robinson and the UK National Advisory Committee on Creative and Cultural Education proposed just four characteristics of creative processes, of which the first is that "they always involve thinking or behaving imaginatively" (DfEE, 1999, p.29).

What distinguished the new models of creativity that arose during the 1990s was an emergent view that it was an accepted attribute of human endeavour, rather than a special 'gift'. This perspective was embedded in the discussion of creative cities, in the literature of psychology, and in neuroscience (Landry, 2006; Csikszentmihalyi, 1996; Wilson, 1998). Research in the field of psychology has still not resolved whether specific thought processes are involved in creative thinking, with some people just being better at using those processes than others, or whether the thought processes involved in creativity are the same ones involved in 'everyday' activities (Weisberg, 2006). However, it would seem appropriate for education in 'creative' subjects such as the fine and performing arts and design, to reflect upon and consider what may be drawn from this work.

Csikszentmihalyi in particular notes that knowledge must be intentionally passed on and learned (1996, p. 37) and that to be creative, one "must first understand the domain" (1996, p.340) in order to recognise novelty or innovation. This reflects an expectation within art and design education that students need to become familiar with past and current work in their chosen field. These ideas were confirmed by Weisberg (1999) who also concluded that "extensive domain-specific knowledge is a prerequisite for creative functioning" and through case studies of renowned artists and scientists in 2006 he provided a robust rejection of the "tension view", that too much knowledge inhibits creative action. In tracing the growth of interest in economic policy for creative and cultural industries Jeffcut and Pratt (2002) also make a number of key assertions.

Firstly, that from "a social constructivist point of view" organisational form constructs creativity in a particular setting and that creative industries are such a particularity. In other words, the kinds of creativity and the conditions that sustain it are related to the situation of any particular practice. They also assert that creativity is "a process requiring knowledge, networks and technologies". These assertions underpin the work of Csikszentmihalyi et al, but more importantly suggest that efforts to raise the "creativity quotient" in individuals may not yield any greater creativity than attention and exploration to and of the context in which it is learned and practised.

Despite the attention of educationalists to the subject, many popular assumptions remain that creativity cannot be taught, that it is really something only delivered by a maverick genius. Although the popular media have sustained this view, there have been an emerging series of conditions for creativity that can be applied within an educational context. Lubart and Sternberg (1995) established

six attributes required to support creative activity. And by 1999 they had refined and set out these conditions as: knowledge, accompanied by intellectual ability, thinking style, personality, motivation and environment.

A further example of a definition of creativity that highlights ways of thinking and practising comes from the UK Qualifications and Curriculum Authority (QCA) which suggests that creativity involves "questioning and challenging; making connections, seeing relationships; envisaging what might be (visualising); exploring ideas and keeping options open; reflecting critically on ideas, actions and outcomes" (QCA, 2001). Alongside this Jackson (2006) concluded that many academics are reluctant to forefront creativity in their teaching precisely because assessment strategies require specific statements about what students will be expected to have learnt "with no room for unanticipated or student determined outcomes". What is notable and often most powerful in these discussions is how these observations resonate with many of the practices in the teaching and learning of creative arts, design and media.

The papers in this session cover a broad range of issues relating to creativity in the disciplines. Penty, Roberts and Longden Thurgood suggest that while complexity is a necessary condition for creativity, perhaps echoing Weisburg's rejection of the tension view, they then ask: "When does the desirable condition of complexity become unnecessary complication?" Gregory argues for the need to reclaim a meaning of creativity specific to creative arts practice and education and develops ideas also expressed by Csikszentmihalyi that to be creative, one "must first understand the domain". In a similar vein, Gaston raises the issues of domain skill and how, as a prerequisite to creative practice, creativity will be sustained despite pressure being exerted on the resources needed to teach and learn these skills. Bull and Osmond look at work being undertaken in the Centre of Excellence for Transport and Product Design, based at Coventry University, and asks in particular "Can creativity be taught?" The paper is based on a longitudinal research project examining students' spatial intelligence (Gardner, 1993). Finally, Petty asks how might more explicit learning outcomes sustain and enhance the "creative potential" of art and design students.

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TRIGGER OVERLOAD? COMPLEXITY AND COMPLICATION (A CASE STUDY OF AN EU-FUNDED COMMUNITY/ACADEMIC PARTNERSHIP)

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Abstract

At the core of the learning experience in architecture and design is the development of an individual's ability to respond creatively to a given design scenario. In live and transnational projects there is inherently less control over inputs, hence many more layers of complexity and stimuli can surface. As a three-way conversation between the Architecture, Interior Architecture and 3D Design undergraduate programmes in the School of Architecture and Design at the University of Brighton, and based on the recent EU-funded Avenue Verte Cyclestations project, we explore the question: "can there be too many creative triggers at play?" Or from the teaching and learning perspective: "when does the desirable condition of complexity become merely a case of unnecessary complication?"

Questions

- Can there be too many creative triggers at play? Or from the teaching and learning perspective, "when does the desirable condition of complexity become merely a case of unnecessary complication?"
- When is the unique value of live projects in providing tangible contexts and narratives for students offset by the straightjacket of a client's seemingly narrow brief and the lack of control over inputs? Or to put it another way, how to alert students to the value of accidental inputs as both spurs to the design process and possible antidote to planned triggers?
- With an established tradition of multinational cohorts providing rich cultural diversity, why engage in transnational design projects, establish links with foreign cultures, and use overseas sites as the basis for research and design work?

Key words

Conversation, cross-cultural, client, community, context, concrete, complexity, complicatedness, contradictions, control

Introduction

At the core of the learning experience in architecture and design is the development of an individual's creative approach and response to a design problem. How to effect this condition in a student's working process? As tutors, we develop diverse strategies or trigger methodologies to help students unlock their own creative way 'into' a project. But in the case of live transnational projects, where there is inherently less control over inputs and many more layers of complexity, the question to ask is: can there be too many creative triggers at play? Or from another perspective, when does complexity become a case of complication?

In this paper, we use the recent case study of the Avenue Verte Cyclestations project to present a three-way conversation between the distinct academic

programmes of Architecture, Interior Architecture and 3D Design in the School of Architecture and Design at the University of Brighton. We proceed by analysing and reflecting on the teaching methods and the palpable results from the students.

Case study: the Avenue Verte cyclestations project

To set the scene, in September 2005 the School of Architecture and Design of the University of Brighton embarked, as the lead partner, on an EU Interreg IIIa-funded project, together with the Commune d'Offranville near Dieppe in France and the Hailsham Trust, a community enterprise in Hailsham, East Sussex, UK. The project aim was to develop design proposals for 'cyclestations' or 'greenstops' in both communities and ultimately to build the first of a network of greenstops in Offranville. Greenstops can be loosely defined as facilities for local and visiting greenway users and community groups, to promote green tourism and healthier living activities. They would be connected geographically, through their location on the Avenue Verte greenway between London and Paris. But also, by responding to the individual sites, local material and cultural contexts, each would have a unique interpretation. The teaching staff saw the exploration of this little charted design territory as a unique learning opportunity to develop new design typologies and to explore issues of sustainability in its broadest sense. A full bilingual description of the project can be found on the project website www.greenstops.org.

Collective project inputs

Launch event: The project began with a launch event at the Sallis Benney Theatre in Brighton attended by the staff, 130 participating students, project partners and collaborating organisations. This one day event, introduced the project and its partners and offered complementary information and inspiration for design directions from a range of speakers. These included the architect Steve Johnson (The Architecture Ensemble) who proposed a design some years earlier based on the use of sustainable timber as an ecological resource. Other complementary inputs came from Sustrans, the UK national charity for the development of the 'greenway' network, Tourism Southeast, contributing a profile of tourist-based users of 'greenways', SIVU Avenue Verte, giving the French perspective on the

development of their routes, and finally, Fulcrum Engineering, inspiring a sustainable and holistic approach to the conception of building **(FIG. 4)**.

Partner briefings: During the course of their study visits, the students were briefed by the Commune d'Offranville and the Hailsham Trust. This included information on the nature of activities and uses they foresaw for the Greenstop, a profile of users and user groups and the broader role they saw the Greenstop playing in their community **(FIG. 5)**.

The sites: Students next embarked on study visits – intense four-day research explorations of their sites and their wider context. The Offranville site was the town's disused and at the time derelict train station built in the middle of the last century with its grounds, located on the edge of town, immediately on the Avenue Verte. The commune had purchased the old station with the firm plan of developing it as a greenstop or 'Halte Verte' **(FIG. 1)**. In Hailsham, the project was at the exploratory and consultative phase, and two contrasting sites were to be considered. The first was immediately on the Avenue Verte or Cuckoo Trail which traverses the centre of town, hidden in a heavily wooded cutting **(FIG. 2)**. This was to be a 'new build'. The second was a listed Georgian Hailsham family home on the High Street with the possibility of redevelopment **(FIG. 3)**. The Architecture and Interior Architecture groups were split between these three sites, while the 3D Design students researched both sites, as their focus was on the design of unifying elements for the Avenue Verte on both sides of the Channel. Each programme had an individual approach to this phase as described below, but for all three, the site for the place of intervention had, by far, the biggest impact on the development of the projects **(FIGS 6, 7,8)**.

Individual discipline approaches

Architecture: It is stories that make architecture. Part of the development of those stories is the choice of characters that become active in this narrative. We feel that the most important characters in the evolution of a project are: *place* (a rigorous examination of where), *programme* (who carries out activities and in what relationships do these activities occur?), *material and structural choices* (with what materials and how are these spaces made?) + the possibility of conjecture (what if?). The most successful architecture carefully incorporates all these parameters. When an amalgamation of these factors

occurs, we are working with *COMPLEXITY*. Complexity is desirable. It generates conversations – a layered approach with depth. Trust is implicit in this scenario.

Interior Architecture: The students were required to make a device that measured aspects of their site through photography. The emphasis was on making a low-tech instrument that registered movement and occupation. The emphasis in Interior Architecture is twofold; a clear relationship to existing built fabric and, the body moving in space/touching surfaces. The images evolving from the use of this device were placed alongside the strict site measurements and the resultant hybrid imagery was used to formulate conceptual diagrams. Programmes were chosen both from the given brief and a personal investigation of the place. These were then playfully woven through the new diagrams and the physical conditions of the existing building. The emphasis was on the compulsive power of the image as a generator of the design process.

3D Design: 3D Design students were asked to make a design intervention for the Avenue Verte or the greenstop building that would work on all selected sites. A range of broad themes were discussed, such as connecting the greenstop to the community, connecting the two greenstops, and creating a distinctive feature, amenity or element of identity that could work across the network. While the nature of the intervention was very open, ultimately it had to be grounded by a rationale and a creative response to an issue identified.

A key strategy in identifying issues was the development of user scenarios. To this end, we organised a day's scenario-building workshop, while on site. In groups, students created narratives for a range of distinct user groups. The issues then emerged from the scenario narratives, and they were free to explore creative responses to these issues, in combination with selected elements from their visual research. Visual research is another key element for identifying a unique response to a project. Through a range of research tools, students recorded their 'experience' of the Avenue Verte as users and through observations of the site, the wider community and local material culture. These included photography, use of sketchbooks and drawing, interviews and conversations with locals, and material experiments.

Analysis and reflection

Architecture: There are times, however, when the addition of characters coming together through a simplistic series of 'couplings' becomes counter-productive. If we take these 'couplings' in the accountancy sense of *just* more layers of information and opinions, we find ourselves in the uneasy and unworkable situation of *COMPLICATION*. Essentially, what occurs is an incompatibility of possible outcomes.

Referring back to the individual discipline approaches (see above), all the characters were in place for this project apart from the untested notion of collaboration through the mechanism of contributors not having a common aim – there was no 'what if'? This is not necessarily a problem when the partners are mature, but when students are in front of inflexible opinions, they can become paralysed – they acquiesce to the position of power. This is also a problem with the nature of how architecture is conventionally conceived – simply as problem solving rather than the exploration of complex parameters through conjecture and the writing of scenarios.

If our thesis is that triggers (creative inputs) are essential for the successful realisation of a design project, then, for it to really work, there has to be choice over those inputs. Successful design teams come together by virtue of a sense of compatibility married to a sense of adventure (and vice versa). There is also the intriguing question of accidental inputs; what has been called in our discussions the "ladies" of Hailsham and the "park kids" of Offranville.

Interior Architecture: On reflection the project was successful through the variety of devices (and the results of their measurement) that evolved. The beauty of the imagery and the sophistication of their manufacture was a catalyst to further investigations. On the whole, the project developed through strict rules coming out of these drawings in concert with clear depiction of existing conditions. By intensifying the number and style of the design methodologies, the students could quickly see the possibilities of pursuing a proposal. The clients' briefings were only politely adhered to; the provocative and intensely personal interventions continually drove the project. Much as in Architecture, the control of the methodological inputs (largely an internal affair) proved crucial to the outcomes.

Complexity is desirable. It generates conversations – a layered approach with depth

3D Design: For 3D students, this was a very open brief with few external constraints and many layers of creative triggers. As a result of the scenario workshops, most students were able to select and focus on a main trigger or driver to develop the thrust of their creative response. Subsequently, they selected and introduced further layers as they developed their concepts and evaluated their 'correctness'. This is the stage where weaker students needed most guidance – evaluating relevance and integrating a range of possibly contradictory requirements while not losing the creative vision. The most valuable tools in creating a framework from which to initiate and evaluate creative responses was the use of user narratives together with their first-hand experience of the sites. 3D students also benefited from the collaboration by attending the Architecture and Interior Architecture crits and considering at a very early stage a range of responses and notions of what the cyclestation experience could be.

Conclusions

Obviously diverse conclusions have to be posted here. Three disciplines carried out a project in different ways but were conjoined through outcomes and expectations generated from outside the respective disciplines.

Architecture: Interreg III was a good test. Many students worked with the inconsistencies and produced vibrant work. To do this, they tended to ignore one of the inputs – in this case, the clients' vested interests. Students generally responded well to the theoretical ideas forming the impetus of the project, but also developed accelerated scenarios through encountering the "ladies" of Hailsham and the "park kids" of Offranville.

Interior Architecture: In a sense, the specifics of the Interreg III project were incidental to the way Interior Architecture carries out its projects. It always operates through cumulative and empirical probes and an interrogation of place. Responses gleaned by juxtaposing an aleatoric measuring device alongside that place are fortuitous design tools.

3D Design: 3D students responded very positively to this brief thanks to the anchoring afforded by their use of scenarios and narratives, superimposed onto their first hand 'experiencing' of the sites. The question of trigger overload had to be dealt with on an individual basis, and the personal journey of discovering their own navigation systems with the help of some tools and guidance was, on balance, a valuable one. In short it was a valuable exercise in learning how to navigate through the complexities of 'live' projects.

Collectively: Live projects certainly introduce additional layers of inputs over and above academic requirements. These sometimes include seemingly 'narrow' constraints from the clients. However, in this case study we should add that the cross-cultural/cross-Channel element and the cross-programming layer were instrumental in developing coherent projects. This could easily have deteriorated into trigger overload, but in the more successful projects, students made sense of the complexity of triggers by clear analysis and the prioritising of inputs, using this as the initial creative driver and later integrating other issues or inputs into the synthesis phase to produce a multilayered response. It would therefore seem that the important issue from the teaching side is not so much the number of inputs, but providing the students with strategies for handling them. Indeed, it can be argued that live projects inspire and motivate students as these provide more tangible user scenarios and sets of constraints within which to operate creatively. It is the 'real' encounters and experiences which cannot be found in the studio that add richness and complexity to the process and ultimately the outcome.

Finally, design triggers operate in an intensely personal way. It was generally agreed by the three disciplines that pursuing a proposition through multiple inputs of both rational and irrational data was an effective method in securing a wide range of outcomes. The more successful projects came about by controlling the nature of the inputs, but when a trigger devolves into a contradictory imposition, the design process can be derailed.

The sites:

FIG. 1: GARE OFFRANVILLE AND STUDENTS.

FIG. 2: CUCKOO TRAIL, HAILSHAM.

FIG. 3: TOWN HOUSE, HAILSHAM

Clients:

FIG. 4: PROJECT LAUNCH BRIGHTON, SEPT 2005.

FIG 5: STUDENT BRIEFING IN MAIRIE, OFFRANVILLE, OCT 2005.

Process:

FIG. 6: ARCHITECTURE: NIGHT SECTIONS.

FIG. 7: INTERIOR ARCHITECTURE: DEVICE.

FIG. 8: 3D: SCENARIO WORKSHOP

Work:

FIG. 9: JAKE KELLY, ARCHITECTURE.

FIG 10: ROBERT ROWLEY, INTERIOR ARCHITECTURE.

FIG. 11: ANNA MCCONNELL, 3D.

RECLAIMING CREATIVITY FOR CREATIVE ARTS EDUCATION

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Abstract

This paper points to the need to reclaim a meaning of 'creativity' that is specific to creative arts practice and creative arts education. Within the last decade especially, the meaning and place of 'creativity' in society has been dominated by economic imperatives and underpinned by an individualist (subject-centred) understanding of what it means to create. Against these trends, the paper looks to contemporary theory and visual arts practice for alternative conceptions and instances of creativity. It concludes by suggesting steps towards a practical pedagogy that would assist the emergence of a specifically artistic creativity within a context of higher learning.

Questions

- What does 'creative' mean in the phrases 'creative arts' and 'creative industries'?
- Is creativity today just another word for utility or success?
- How can we devise a pedagogy of creativity if 'creativity' is understood (in the strong sense) as the emergence of something currently unimaginable and yet of great importance to our future?

Key words

Creativity, arts education, pedagogy, economy, emergence, visual arts, studio , post-structuralism.

Introduction

Within the last decade, the term 'creativity' has acquired remarkable currency within higher education. No doubt this is due to an *economic* agenda, especially in the UK, which valorises creative individuals and enterprises, seeks to expand the creative industries, and speaks in visionary terms of the new 'creative economy'. The UK's Cox Review (2005) makes clear the desired linkage between training for creativity and national economic performance, while the OECD seeks to build 'national innovation systems' to transfer knowledge and creativity from university researchers to industry. In other words, education for creativity is at the heart of the economic agenda.

Against that background, this paper sets out to reclaim the meaning of 'creativity' for creative arts education. It identifies key issues surrounding the term, and points to possible directions for research towards a practical pedagogy supportive of *artistic* creativity.

The meaning(s) of creativity

A first obvious issue is the meaning of 'creativity' itself. The economic agenda has led to both an over-use of the term and a marked dilution of its original force. Creativity is now routinely ascribed to whatever is 'new' and 'significant'. This may include anything that adds to 'the chain of value' – from a novel idea or more efficient manufacturing process to 'creative marketing' or new forms of distribution. In recent researches, the word 'creativity' has been applied to cheese tasting and to the rebranding of a familiar toy. As early as 1999, the philosopher Paul Feyerabend was moved to complain that "today … even sneezing counts as a creative act" (Feyerabend, 1999).

Conversely, when the word 'creation' entered the English language (in the 13th Century) it formed part of a theological discourse. Central to its meaning was the divine ability to create *ex nihilo* (from out of nothing). It was not until the 18th Century that the verb 'to create' was *positively* applied to human activity. And the noun 'creativity' appeared in English dictionaries only after 1933 (Pope, 2005).

It should not be thought that these linguistic beginnings are unimportant. Table 1 shows how

Table 1 Acts Of Creation / Creativity

Creator	God	genius	*homo economicus*
Source	working with clients and having to accept their decisions	innate genius (spirit of nature within individual)	innate creativity (individual spirit/ capability)
Materials	*ex nihilo*	ideas and materials	ideas, materials and processes
Mediation	unmediated expression of divine power/being	craft production systems of patronage	industrial production post-industrial information flows
Outcome	original world	original artworks found a new cultural world	new and significant products, services or markets
Relation to outside	God saw that it was good (reconciliation of spirit and matter; religious-ethical)	exemplary artworks make enigmatic original sense and create the taste by which they are judged (aesthetic community)	functionality within existing economic and social-cultural structures (market relations)
Audience experience	innate divinity (pure spirit)	contemplation passive transformation	consumption / use controlled participation

traces of the original sense of (divine) creation have persisted through centuries of cultural mediation and ideological appropriation. For example, the figure of the artistic genius was modelled on the divine creator; his transcendent acts of production were thought to bring a new cultural world into being. And we continue to locate the source of creativity within the individual, while citing the evidence of independent works (referred to as *original creations*). **SEE TABLE 1.**

The later notions of aesthetic and economic creativity developed under specific historical conditions, emerging in tension with the older religious sense of creation. Nevertheless, all three belong to a single framework of understanding that has dominated Western thinking. This is the idea that all that exists has been produced as *an object*, both for and by a *subject* (divine or human). A recent variant of this understanding (Cowdroy and de Graaff, 2005), defines creativity as a hierarchical sequence of:

conceptualisation – schematisation – execution

The underlying assumption is that the source of creativity lies in (immaterial) ideas generated in the mind of an individual, self-sovereign subject.

Creativity begins as an inherently *individualised* ability or act; it operates *instrumentally* as a free-floating means that is selectively set to work within the surrounding culture, where it may be attached to any desired end – aesthetic, personal, or economic (Gibson, 2005). Beneath all historical changes of meaning, creativity remains steadfastly indexed to an originating subject.

Questioning creativity

But it is precisely this type of subject-centred understanding that has been challenged within creative arts education, since at least the 1980s, under the influence of philosophies of structuralism and post-structuralism.

Structuralism famously rejected the notion of the (human) subject as the author of original thoughts and actions, as the source of meaning and value. Meaning was generated elsewhere: within shared symbolic systems, or dominant structures of culture and language. In consequence, notions of artistic originality and intention were dismissed, along with references to 'innate' or individual creativity, as outmoded humanist ideology. With post-structuralism, the subject was reduced even further – to a 'node' or 'effect' of historically variable relations of power

– leaving the socialised individual to assume partial identities or inhabit shifting *subject positions*.

In retrospect, this attack on the subject may be seen as the culmination of an historical series of displacements that dislodged the earth from the centre of the solar system, demoted man from the 'image of God' to a product of blind evolution, placed the rational mind under the sway of unconscious forces, and delivered speech from intended meaning into the uncontrollable play of language. It is not just philosophical post-structuralism but 'scientific' theories of psychoanalysis, linguistics and natural evolution that have challenged the idea that all creativity must be intentionally planned and controlled by a directing subject.

In the wake of these developments, arts educators are faced with a two-fold task in relation to creativity. We must develop a pedagogy that acknowledges the theoretical shift away from the self-sovereign subject, while coping with the pressures of an economic agenda that tends to reinforce that subject.

In responding to this predicament, it may be instructive to look to actual artistic practices, to see how contemporary artists position themselves within the co-implicated fields of economic and artistic activity.

Emerging forms of 'creativity' in the visual arts

Firstly, if we focus on the visual arts, there is a generalised questioning of the framework within which the artist, as subject, produces an original object as his/her work. Instead of creating *ex nihilo* (from scratch or from original ideas), today's artist practises an art of recombination of pre-existing materials. And s/he often begins in the midst of things, by responding, appropriating, or repeating with difference, as much as initiating. Two, quite different, examples will illustrate this.

According to new media theory (Manovich, 2001), the digital artist follows a 'logic of selection' in which s/he selects an already available image (or text); cuts and pastes; assembles with other borrowed image fragments; manipulates and edits; and outputs the result. The model for this type of practice is the DJ or programmer who remixes or reprogrammes existing data to produce new effects. This can result in mere modish variation. But where the process embraces chance, contingency, and experimentation beyond the known, there is a possibility that

something unprecedented may occur – an opening to 'meanings' not readily recoverable within existing frameworks of understanding.

In contrast, 'relational aesthetics' (Bourriaud, 2002) focuses less on processes than on audience relations. The idea is to set up an open-ended situation within the gallery so that it must be completed by the viewer who actively establishes a relation to it. The artist may cook a meal for whoever turns up, sit and chat, or provide access to information sources, leisure activities, or a space to 'chill out'. Again, this is an art of 'post-production'; the artist no longer produces an independent art object. Instead, s/he provides the viewer with a set of tools to experiment, make connections, and reflexively discover new meanings or relations. In terms of our earlier discussion, the viewer is invited to actively *constitute* a new subject position (rather than adopt an existing one) from out of the experience of the work.

Interestingly, in light of these new practices, we are able to retrospectively reconceptualise traditional arts practices as both cut and paste operations, and as relational. A painter selects from a database of colours, and manipulates stock images of objects and people; and s/he invites an audience relation (subject position) of passive contemplation. This is no longer heroic 'creativity' as we have known it.

Art and the new economy

Secondly, the new art practices have a complex relation to underlying economic structures. If painting is a form of craft production, and minimalist sculpture corresponds to the era of industrial production, these new practices contribute to the post-industrial *service economy*: they provide services or experiences rather than products. Very briefly, they are distinguished by: viewer participation and eradication of the distinction between producer and consumer; recycling of materials; just-in-time delivery (immediately within the gallery or via the internet); and a globalised market (of international biennials and internet). It would be instructive to see more research in this area, tracking the changing forms of artistic creativity in relation to structural changes within the economy.

A pedagogy to support creativity

The final section of this paper turns to creative arts education to suggest possible directions for research or grounds for a practical pedagogy that takes account

of the foregoing issues and arguments.

If creativity now means many different things within different frames of reference (personal, aesthetic, scientific or economic), it will be up to artists, researchers and educators to reclaim a meaning that is *specific* to the creative arts. Resources for this task may be located within the various changes that are taking place in contemporary artistic practice. These changes give a clear indication of a shift in the meaning of creativity:

- away from the artist as the originator and master of meaning (the self-sovereign subject);
- away from the self-sufficient artwork (the 'completed' object);
- towards the remixing and reprogramming of materials and meanings (repetition with difference);
- towards open-endedness and emerging relations (exceeding any controlling intention).

These changes are unfolding against the background of a service economy in which art and consumption are slowly 'trading places', so that the final meaning of an artwork is determined by the way it is taken up (or rejected) by an audience that is prepared to engage seriously with art and to contribute to transformations of meaning. Actual outcomes will depend on the success of the co-operation between artist and audience in escaping from existing habits of thinking, seeing and being.

If there is a key word for this new kind of creativity, it may well be 'emergence'. In which case, the job of creative arts educators will be to provide a learning environment that is maximally supportive of such emergence. Below are five practical steps that may help in this task. They are not intended to replace but to supplement existing teaching strategies:

- new teacher-learner relations of co-operation as co-creators of meaning
- a greater toleration of students working under conditions of uncertainty and ambiguity
- encourage students to make the studio a place of experimentation: allow for connectivity, open-endedness, re-mixing of ideas and images, diverse use of media and materials; don't look for quick resolution, but see what emerges and follow its unfolding

- collaboration and inter-disciplinarity: creative arts students should seek to involve students of science, technology, media and business in both the creative process and as an active audience who co-determine the final structure and meaning of the work
- allow for unanticipated learning outcomes as well as fixed learning objectives

And perhaps a sixth measure: a teaching module on 'creativity' to encourage thinking and discussion of the types of issue raised in this paper.

Conclusion

However necessarily implicated in economic processes, the arts should seek to reclaim the strongest possible 'creativity' – the type that might bring about a paradigm shift within our culture (opening up an unimagined dimension of the future). This is not something we can expect of students, but we can orient them towards that goal, however seemingly remote or impossible, and help prepare the educational conditions that may contribute to its eventual emergence.

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WITH CURRENT INCREASED DEMANDS ON STAFF TIME AND INSTITUTIONAL PRESSURES TO REDUCE TEACHING HOURS, HOW LITTLE TEACHING IS 'TOO LITTLE'?

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Abstract

This paper will discuss an ongoing project based in the School of Design at the University of Leeds. It will investigate the problems related to teaching practical design subjects, with particular reference to knitted fabric design within a Russell Group university where external pressures demand a reduction in staff/student contact hours. The paper will investigate the problems specific to practical subjects that have been taught traditionally in a time-rich studio environment. Parallels can be made with any subject requiring the simultaneous acquisition of aesthetic and technical skills.

Questions

- At what point is too little practice reached?
- Can an enhanced academic content compensate for a reduction in practice and still produce good designers?
- Is there a place within the textiles industry for academic-focused design graduates?

Key Words

Experiential learning, contact hours, knitwear design, technical skills, aesthetic skills, good practice

Introduction

This paper will discuss an ongoing project based in The School of Design at The University of Leeds. It will investigate the problems related to teaching practical design subjects, with particular reference to knitted fabric design, within a Russell Group university. As in many higher education institutions there is pressure from 'above' to reduce staff contact hours with students. This project aims to explore the possibility of supporting the student and staff experience whilst maintaining a high staff-student ratio and relatively low staff contact hours. It will investigate the problems specific to practical subjects that have been taught traditionally in a time-rich studio environment. The project will conclude in August 2007 and will report findings in September 2007.

Context

"Studio-based activities are a significant feature of art and design education, providing loci for both individual and group tuition" (QAA Benchmark Statement on Art and Design, 1996). Nationally many design-led programmes have a high proportion of practice-based content. This allows significant time for experimentation, design development and research-led learning. This leads to a deep engagement with the subject; however studio-based design modules traditionally demand high staff contact hours.

Across the design education community, increased demands on staff time have led to a reduction in the hours available for teaching. Nationally institutions are encouraging a reduction in contact hours.

Challenges specific to the University of Leeds where students studying on the current BA (Hons) Textile Design programme follow an unusual programme of study involving 50% studio practice and 50% academic work (lecture, seminar, independent study) means that students have less time to develop their work within a taught studio environment. This however is compensated by a greater academic understanding of design theory and design technology. Students' outputs are reduced in line with module weighting. However because of the developmental nature of design it is not always achievable to produce less work but accomplish a higher standard.

One of the most important outcomes of studio-based teaching is the excitement it can generate among students about their subject. Given time, students can be introduced to basic skills and techniques and through design development each cohort discovers how to use that technique with sophistication. It is the excitement of the discovery that engenders a passion for the subject.

New textile design programmes within the School of Design at the University of Leeds, starting in 2008, will contain a smaller ratio of staff-rich, studio-based content. This will however reduce the studio practice of the students and raises the question; at what point is 'too little' studio practice reached and can an enhanced academic content still compensate and produce good designers?

Initial case study

Observation of a level one BA (Hons) Fashion Design module introducing students to the design potential of knitwear highlighted the problems associated with compacting delivery of a module. As a precursor to introducing a knitwear strand to the BA (Hons) Fashion Design programme, a large cohort of students needed an introduction to knitwear. A successful level one BA (Hons)Textile Design module was adapted to the needs of fashion design students. When first introduced in 2005, students were expected to complete a large workload involving research, technical developments and design developments. Due to the studio-based delivery of the module, students required a high level of extra support from staff and many of the cohort coped with a large workload strategically, doing enough to fulfil the criteria of assessment but not engaging with the subject. This surface approach to learning meant that

in many cases the student's potential was not fully recognised. Large student numbers dictated that the module was repeated several times.

During module review at the end of the session it was felt by staff delivering the module that students had been asked to do too much in a short space of time. In an attempt to reduce staff contact hours and engage the students more deeply with the subject the module content was focused in the expectation that with a reduced workload the students would have time to engage more deeply with the subject matter and would require less additional support. Evidence from the practical work submitted showed that students engaged to a lesser extent than the previous year's cohort and produced even less successful work overall. Staff satisfaction was low as the teaching was repetitive to ensure each group had the same experience. This was exacerbated by the basic level achieved by students. Student feedback indicated that they felt that they would have benefited from spending more time on the module, however this was not available in an already full programme.

It was recognised that the lack of success of the second group of students undertaking the module may have been due to a variety of reasons. It was felt by teaching staff that the results of the module assessment indicated a reduction in contact hours whilst trying to teach using traditional studio-based methods does not allow students to engage deeply with the subject even when module content was reduced. If the module is to be successful in the time allocated for it, new methods of delivery must be found.

Subject-specific problems

One of the specific difficulties in teaching knitted fabric design is that to produce successful design it is essential to understand the technical properties of a knitted fabric and how the fabric is produced in relation to complex equipment. It also requires a high level of understanding of the properties of yarns as this directly influences the success of a design. These requirements are in addition to good general design practice eg use of colour and proportion. This is congruent with current research on teaching textile design. For example, Wilson reviewed the provision of textile higher education in England (Wilson, 1997). After surveying programme leaders about ideal course content she found that all agreed that an

At what point is 'too little' studio practice reached and can an enhanced academic content still compensate and produce good designers?

understanding of design technology is very necessary.

Traditional, experiential learning allows tutor demonstration of production of a knitted fabric and then offers students the opportunity to develop the technique gaining an understanding of fabric structure and aesthetics of design simultaneously. This requires the student to experiment at the knitting machine. As most students rely on equipment provided by the institution they need time in the studio with access to equipment to progress.

In level one it is rare for students to have experienced machine knitting. Many students are apprehensive when approaching the machines for the first time and the curriculum must accommodate a period of 'bedding in' when the student is unwilling to experiment as they have little confidence in the process of fabric production. This further prolongs the time required for students to benefit from current knitted fabric design teaching.

Aims of the project

Through analysis of good practice across disciplines and institutions this project aims to assess the different approaches to teaching practical design. It will assess the possibilities for the reduction of staff/student contact hours. It will enable the development of innovative approaches in the delivery of high-quality inspirational learning experiences. Possible outcomes may include the successful use of virtual learning environments, extension of problem-based learning, application of conceptual theory or core teaching with differing practical outcomes.

Application in other disciplines

Despite addressing the specific requirements of teaching knitted fabric design, this project has relevance to many other disciplines. Parallels can be made with any subject requiring the simultaneous acquisition of aesthetic and technical skills, for example computer aided design requires knowledge of design software before successful images can be produced, architecture requires a deep understanding of building structure. The project could have a wider impact extending beyond textile design to other subjects where practice and theory are important, for example engineering or medicine.

Conclusion

Although in the early stages, this project has highlighted that a reduction in staff contact hours can have a significant impact on student performance. To successfully reduce staff contact hours it will be necessary to develop new strategies for delivery of module content. It is the intention of this project to collate evidence of current good practice in the delivery of high-quality design education and assess alternative delivery methods.

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CAN CREATIVITY BE TAUGHT? CREATIVITY IN TRANSPORT AND PRODUCT DESIGN

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Abstract

This paper considers the contested notion of creativity, both in general and as it pertains to design, and a synopsis is offered of a longitudinal study being carried out by the Centre of Excellence for Transport and Product Design (CETPD), relating to the existing creative baseline of 'spatial understanding' for the Transport and Product Design course at Coventry University. The use of an existing test, plus the use of a pilot tool developed from the research aimed at measuring students' spatial understanding on entry to the course are discussed and the authors argue that before considering whether creativity can be taught, defining a creative baseline within a particular domain needs to be undertaken.

Questions

- Is it possible to fully define a creative baseline?
- Can creativity be domain specific?
- Are threshold concepts domain specific?

Keywords

Design, transport design, product design, spatial understanding, creative baseline, creativity in design.

Introduction

This paper considers the contested notion of creativity, both in general and as it pertains to design, and a synopsis is offered of a longitudinal study being carried out by the Centre of Excellence for Transport and Product Design (CETPD), relating to the existing creative baseline of 'spatial understanding' for the Transport and Product Design course at Coventry University. The use of an existing test, plus the use of a pilot tool developed from the research aimed at measuring students' spatial understanding on entry to the course are discussed and the authors argue that before considering whether creativity can be taught, defining a creative baseline within a particular domain needs to be undertaken.

What is creativity?

Christiaans argues that most definitions of creativity contain aspects such as "…unusualness, appropriateness, transformational power and condensation of meaning" (Christiaans, 1992, p.15). However, the phrase 'creativity' has many meanings: a Google search produces 64,500,000 hits; there are countless 'creativity' courses available; most of us are familiar with terms such as 'creative cooking', and 'creative accounting' (ibid, p.11); and, more recently, the 'creative curriculum'. The term is no less prevalent in the academic literature, with 'creativity' being studied by philosophers, psychologists and scientists.

Further, it seems that people who are regarded as creative tend to "…gravitate towards professions that either encourage or at least do not discourage more emotive forms of expression" (Ludwig, 1998). More recently, according to Lawson, "…the difference between 'intelligent' and 'creative' groups has been a tendency to excel in either convergent or divergent thinking" (Lawson, 2006, p.152). Whilst Perkins, a long-standing member of Project Zero, an educational research group at the Graduate School of Education at Harvard University, which specifically focuses on understanding the "…learning, thinking and creativity in the arts…" (Project Zero, 2007) feels that creativity is a disposition, "…a kind of attitudinal flashlight that we shine toward many things, but not everything… creative people… can be ordinary too" (Perkins, 2001).

It seems then that defining the meaning of creativity is problematic. As a phrase it is used in everyday life to ascribe unconventional characteristics to 'conventional' subjects such as accounting; its characteristics are studied and debated by all manner

of experts in all manner of disciplines. There also appears to be a general perception that creative people are more likely to prefer 'creative professions', to 'think around corners', and tend to evidence creativity only in certain areas.

Creativity in design

As with the phrase 'creativity', 'design' also has many meanings - Lawson argues that it is both a highly professional and an everyday activity; people routinely 'design' their surroundings at home for example. In addition, within the field of design are all manner of disciplines, although Lawson feels that some design fields do share common ground, namely the "three-dimensional and environmental design fields of architecture, interior design, product and industrial design, urban and landscape design" (2006, p.4).

Therefore, reaching a 'one size fits all' definition in relation to creativity and design is difficult and often results, according to Christiaans, in general and superficial statements. This is compounded by his belief that creativity is situated in a particular domain of knowledge; therefore an investigation of the 'creative' aspects within a domain is useful and, once identified, an examination of whether this creativity can "...be increased by training" can be undertaken (1992, p.17).

Bearing this in mind, below is an outline of the first year of research by the Centre of Excellence for Transport and Product Design (CETPD) at Coventry University that explores the notion of one creative aspect essential to this domain.

Creativity on the Transport and Product Design Course

In the domain of the Transport and Product Design (TPD) course at Coventry University, the most important aspect of creativity, or the 'creative baseline', is seen by staff as the possession and development of spatial understanding. Without possessing spatial understanding, students cannot gain entry to the course; if they do possess it but are unable to develop it during their studies, they cannot hope to complete the process of identity formation, through which students attain the goal of becoming a 'professional designer' (Osmond et al, 2007) As such, development of spatial understanding in this context could almost be viewed as a threshold concept, defined by Meyer and Land as:

> "...akin to a portal, opening up a new and previously inaccessible way of thinking about something. [Threshold concepts] represent a transformed way of understanding, or interpreting, or viewing something without which the learner cannot progress." (Meyer and Land, 2003).

One of the first-year research aims of the CETPD was to design a pilot tool to measure students' development of spatial understanding during their first year of study, and a first step was to try and define the meaning of spatial understanding as it relates to the TPD course. Using Meyer and Land's notion of threshold concepts as a framework, the research question 'Is spatial understanding a threshold concept?' was formulated and, in addition to a literature search, informal interviews with first-year students and their tutors, a whole-staff meeting and observation of the admissions process took place.

Firstly, a search of the literature revealed that the concept of spatial understanding has long been debated, and a number of terms are offered, particularly from Howard Gardner, who as well as developing a theory of multiple intelligences, has, along with Perkins, long been involved with Project Zero. Gardner's definition of spatial intelligence, amongst others, was used as a starting point for discussion with staff:

> "Central to spatial intelligence are the capacities to perceive the visual world accurately, to perform transformations and modifications upon one's initial perceptions, and to be able to re-

"...The difference between 'intelligent' and 'creative' groups has been a tendency to excel in either convergent or divergent thinking" (Lawson, 2006)

create aspects of one's visual experience, even in the absence of relevant physical stimuli… spatial intelligence emerges as an amalgam of abilities. The most elementary operation, upon which other aspects of spatial intelligence rest, is the ability to perceive a form or an object… appreciating how it will be apprehended for another viewing angle, or how it would look (or feel) were it turned around… Such tasks of transformation can be demanding. The ability to solve these problems efficiently is special." (Gardner, 1983)

After several engaging and interesting discussions, multiple definitions of spatial understanding as it relates to the course emerged from staff interviews, and agreement was reached that spatial understanding itself was not a threshold concept, "but that there are components that result in this". Therefore, spatial understanding is seen by staff as akin to a 'meta-concept' underpinned by potential threshold concepts such as 3D visualisation, confidence to challenge/expand design clichés, empathy, group work, observation, perspective and proportion skills. Existing possession of some of these skills is sought in entry interviews - observation of the interview process found that students are sought who show some evidence of spatial understanding through a demonstration in their portfolios of several factors: the ability to draw ideas in 3D from the imagination and conceptually sketch these three-dimensionally; an inquisitive attitude/hunger for knowledge; a 'playfulness' that facilitates the stretching of boundaries; a lateral and logical approach to tackling problems; and an ability to evolve, change and refine ideas.

If applicants can demonstrate these skills and abilities, it is recognised that they are already developing the ability to develop convergent and divergent thinking - or perhaps what Perkins calls "breakthrough thinking" (Perkins, 2001) - and therefore the ability to tackle problems that are often ill-defined, or 'wicked' in that they "… have incomplete, contradictory, and changing requirements; and solutions to them are often difficult to recognize as such because of complex interdependencies" (Buchanan, 1992).

The skills and abilities that the students evidence on entry are then developed and enhanced during their first year through subjects such as drawing and model-making, ergonomics, engineering, design analysis and contextual issues that pertain to design. A large focus of the teaching is on developing creative thinking skills - as a member of staff comments:

"My observation of the people that we get in is that they all have had different experiences, but most students are coming in from an educational system where they want to know what they need to do to pass. They are not variety or choice orientated - they want to know what is right and what is wrong. What we do is give them permission to not be asking that question - my aim is to stop them asking me what it is that they have to do next."

An example of the focus on creativity is the requirement to produce a 'thought receptacle' which involves students reflecting upon and discussing their thoughts around existing designs in the outside world. Students have been known to struggle with this activity because they are not given a prescriptive list of things to include, which resulted in comments such as:

"[the thought receptacle] should reflect your personality and… music I liked and sometimes poems and wrote down a lot of… but it wasn't much so then later on [the lecturer] said relate to design as well… the creative thing wasn't really set in."

Creativity exercises are also introduced, including role play and techniques such as 'forced connections' - to enable students to question their preconceptions, but, according to one member of staff, "the real creative teaching takes place… implicitly through problem solving, direct modelling, sketch modelling… experiencing it where it really takes place." Eventually the teaching brings students to a point where they are eligible to enter the second year and ultimately to enter the global transport and product design industries.

In summary then, the research found that the creative baseline of spatial understanding that underpins the Transport and Product Design course was not easily definable, nor was it a threshold concept. However, components, or potential threshold concepts that comprise spatial understanding in this context were identified and early signs of skill in these were sought during the application process.

These entry-level skills are then enhanced through the teaching practices of the staff until the students achieve a 'design identity' that allows them entry into the transport and product design community of practice.

Can creativity be measured?

At this point then, it seems that if we accept that students who enter the course already possess the applicable creative ability, then the answer to the question 'Can creativity be taught?' is yes, as long as a creative baseline is defined that can be taught from. In this case, because the exploration of the creative baseline of spatial understanding proved problematic, and therefore the development of a pilot measurement tool would also prove problematic, it was decided to use an existing test - the *Purdue Visualization of Rotations Test* (Bodner and Guay, 1997) - to measure students' spatial understanding on entry to the course. The Purdue Test, hereafter cited as PVRT, was chosen as it is a standardised test for measuring spatial understanding, albeit more widely used in disciplines such as chemistry (Carter et al, 1987), engineering (Olkun, 2003) and earth sciences (Black, 2005, Sibley, 2005).

The PVRT was implemented with 114 TPD students on the 2006 first-year intake. The initial results show a range of scores which were then compared with existing results achieved with chemistry students at Purdue University. Similar results were found, indicating that although the disciplines are very different, the spatial awareness skills and abilities being measured are similar. If, as was found at Purdue University, there is a correlation with the students' PVRT scores and their end-of-year assessment results, then it may be possible to use the test as an indicator of student ability in terms of spatial awareness on application to the course.

In addition to the PVRT, the students also were asked to undertake a set of tasks developed using some of the potential threshold concepts identified during discussions with the staff. The tasks, which form the early developments of the pilot measurement tool, included drawing a simple cube, an object in 3D from an authographic view and the unseen side of a chair.

Taking into consideration gender and, where possible, whether students had indicated that they would be available for follow-up interviews, 25% of the pilot tool results were marked using criteria such as how well the student understood the task(s), accuracy of representation, 3D/spatial-awareness skills and drawing ability. Again, as with the PVRT, the students' end-of-year assessment results will be compared with their scores on the pilot measurement tool. In this case if there is a correlation, it may be possible to use the test as an indicator of domain-specific skills and abilities needed for the course.

In summary, the comparison of the PVRT with end-of-year assessment results may indicate the level of spatial understanding possessed by students on entry to the course; whilst the same comparison with the pilot test may indicate the level of domain-specific skills and abilities needed by the students in order to be successful on the course. Particularly in terms of the latter, this will allow an exploration of the specific teaching practices that enhance the students' skills and in turn allow the identification of why some teaching practices work with some students and not with others. If, however, this is not the case, and there is no correlation with end-of-year assessment results and the results of either test, then the existing creative baseline of spatial understanding will need further examination.

Reaching a 'one size fits all' definition in relation to creativity and design is difficult and often results... in general and superficial statements

Conclusion

This paper has argued that the notion of creativity is contested, with definitions spanning academic and everyday worlds. A synopsis of the research carried out by the CETPD relating to the creative baseline of 'spatial understanding' for the Transport and Product Design course at Coventry University has been offered and a discussion of two spatial awareness tests, one developed directly as a result of the research, have been presented. It is proposed that creativity as it applies to a particular domain needs to be defined and a 'creative baseline' agreed for that domain and it is further argued in this paper that only by examining and establishing an accurate creative baseline, can teaching practices be unearthed and development measured, which may speak to the question 'Can creativity be taught?'.

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IS CREATIVITY COMPATIBLE WITH LEARNING OUTCOMES?

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Abstract

Can learning outcomes play a genuine role in art and design education or do they stifle learning and thus creativity? Observing that 'weaker' students often do not perform well when desired learning is unclear, this paper describes an action research project undertaken to see if learning outcomes could enhance design students' creativity. It applies the theory of constructive alignment and results demonstrate creative improvement not only for those normally achieving lower grades but for the majority of students. This research shows that by making the implicit explicit, learning outcomes, used carefully, can create the opportunity for more students to reach their creative potential in art and design.

Questions

- Has anyone found learning outcomes either restrictive or beneficial to their students' creativity/learning? Does this research help or support that situation?
- Is constructive alignment a manageable, realistic model for teaching/learning? Has anyone achieved it successfully?
- We talk of making the creative process explicit through learning outcomes, but are we really able to define accurately what this is? What are the consequences if not?

Key words

Learning outcomes, constructive alignment, deep, surface, creativity, student-centred, transparency.

Introduction

If it's not broken, why fix it?

The department of Visual Communication where I teach is known for its emphasis on ideas and creativity. To this end projects set are often conceptual and encourage students to expand the boundaries that define their discipline. Colleagues are rightfully protective of these qualities and many are suspicious of learning outcomes, seeing them as potentially prescriptive and stifling to this creativity. They are not alone in being wary, Hussey and Smith (2002) argue that learning outcomes are open to abuse and all too easily make learning rigid.

Nonetheless, The Glasgow School of Art has modernised and implemented the credit system. One year is treated as a module and learning outcomes are written generically for each level, covering the entire design school. Generally it is perceived that avoiding modules is a success and has enabled us to carry on as before, running flexible projects. Learning outcomes are only used at formative and summative assessment as assessment criteria. Their context unexplained, they are misunderstood in both purpose and language, and no one, least of all students, benefits from them.

However, we are missing a vital opportunity. Though our numbers are small, like most institutions there are students of varying abilities and this continues to widen as accessibility increases. I have observed over the years that whilst our model serves 'good' students well, the 'weaker' ones can get lost and confused.

Through studying the context and aims of learning outcomes I realised the system we were so unsure of was student-centred and could be a powerful way to alter the identified problem. It seemed that, if implemented properly, it could provide a structure to realise the creative potential of every student by allowing access to implicit knowledge already held by 'good' students. To explore this theory I undertook an action research project described in the following sections.

Comparing theory and practice

Understanding the concept of deep and surface learning is fundamental in understanding how creativity can be enhanced for a diverse range of students. The term was first coined by Marton and Saljo (cited in Prosser and Trigwell, 1999) in the 1970s to describe the way in which learners approached their studies. Rather than using descriptions, which imply permanent characteristics such as 'good' and 'weak', learning approaches describe a relatively temporary state that can alter according to the teaching environment. If students are left to their own devices, they tackle learning according to their 'default' approach. Fine for deep learners, not good for surface. However, given an active teaching environment a surface learner can alter their approach to become deep.

Active means the emphasis is on what the student is learning rather than what the teacher is teaching. Constructive alignment, developed by Biggs (2003), is based on this knowledge and creates a model to promote active teaching. He defines it as, "getting most students to use the higher-cognitive level processes that the more academic students use spontaneously" (Biggs, 2003, p.5). At its heart are learning outcomes, written from a students' perspective to describe the kind of understanding they should have at the end of a defined period of learning. But writing learning outcomes is only part of the solution. Transparency is essential, so firstly they need to be made available and understandable to the students. Secondly, teaching and learning activities need to be designed to ensure the students engage with the outcomes, effectively forcing students to learn in a different way. And finally, assessment should be aligned to measure to what extent outcomes have been achieved. By implementing all aspects there should be no hidden agenda (Davies, 2003).

Comparing the theory to practice I found several aspects unaligned. Lack of transparency is the main problem. Whilst projects intend to promote deep learning it is not always made clear to students what they are expected to achieve, though this may emerge through the project. Learning outcomes are not included on briefs because they are written in generic and convoluted language and have not been 'translated' to a project level.

Student feedback confirmed my suspicions. Many found briefs unclear and a significant minority said it wasn't clear what they were learning. One commented that projects could be so conceptual he forgot he was learning anything at all! Many said they didn't know *how* to achieve better standards. The language of the learning outcomes was described as "horrendous" and "jargon".

It seemed that constructive alignment could address problems of clarity, but enhancing creativity depends on the content of the outcomes to describe the actual cognitive processes involved. Writing them divergently is fundamental so that rather than placing limits on learning they encourage an exploration of alternatives (Biggs, 1999, cited in Davies, 2003).

Implementing change

Research involved 15 students from third year (English second year) over three projects of three weeks each. To measure progress I took their formative assessment grades from term one as a benchmark, then translated these according to Biggs' SOLO taxonomy (2003) to evaluate their learning approach. Thus grade 2.2 and below describes surface learners and a 2.1 and above describes deep. The group was divided into 10 surface learners and five deep (see table 1). To measure the impact of the changes both quantitatively and qualitatively I graded each project and used a mixture of questionnaires and interviews with groups and individuals after each one.

Many (teachers) are suspicious of learning outcomes, seeing them as potentially prescriptive and stifling to this creativity

FIG. 1

To implement constructive alignment I made several interventions:

Firstly, to improve transparency I restructured the brief to include more information than before, including aims, learning outcomes and assessment criteria. The learning outcomes were project specific using clear language and at briefings I made sure students understood what they were expected to learn. Figure 1 shows an 'old' brief and figures 2 and 3 show the new version. **SEE FIGS. 1-3**

Secondly, I designed and structured teaching and learning activities to enable students to engage with the outcomes. These involved breaking the project down into tasks to elicit specific outcomes and allocating time periods to complete them by. Work was discussed at regular group reviews.

Thirdly, in collaboration with the students, assessment criteria were developed relating to the outcomes (expanding on the ones in the briefs). They were used through peer and self-assessment to enable them to measure the quality of their work.

To test the effectiveness of the changes in different situations I designed three types of project. The first was very focused with set boundaries, the second was very conceptual and the third was a balance of the two extremes. **SEE TABLE 1**

Evaluating the response
Creative impact

Over the course of the three projects, data gathered suggested there were distinct improvements in the quality of creative work produced by students of all abilities, not just the surface learners. This was reflected in the grades (see table 1) where out of 15 students, nine surface learners and three deep achieved higher grades than their benchmark in one or more projects. Of the 43 projects marked only five received a lower grade.

Comments made throughout the projects also supported the universal impact of the intervention. After project one a deep learner said she thought the quality of *everyone's* work had improved. After project three another said: "What people are producing is so much better… the ideas coming out and the way people are working seems to have changed, stuff seems more memorable and thought-provoking."

There is no doubt however, that the main improvements occurred for the surface learners; eight of them achieved 2.1 grades in one or more projects, demonstrating a real shift to a deep learning approach. This cognitive change was observed by a deep learner saying there were, "a lot of interesting outcomes that you wouldn't expect 'certain people' [ie surface learners] to produce". Another echoed this saying that overall the quality of thinking was better than usual. This was highlighted in project three with the most

FIG. 2

widespread self-awareness of this transformation; seven students' comments (mainly surface learners) were characterised by phrases such as "normally I would, but this time I…", or "this was the first time I had…". Change included feeling motivated instead of worried, having many ideas instead of a few, acting on ideas instead of just thinking about them. These comments reflected a general improvement by surface learners in quality of research, analysis, selection, editing and ideas generation.

Strong evidence that learning outcomes enhanced creative thinking was revealed by which project students had found them useful for. Initial feedback after project one – the most focused – suggested they had been useful but might restrict them creatively in an open brief. However, this view changed dramatically after completing project two – the most open – where the vast majority said they were more appropriate. Without them they said they would have gone "in the wrong direction". It was voted their most successful project and conceptually elicited the most original and resolved responses. Grades correspond with this feedback (see table 1): project two achieved 11 2.1 grades, six of whom were surface learners. Project three was similar with eight 2.1's and a first, but only three of whom were surface learners. Meanwhile project one achieved very variable grades, though did include two firsts.

The tendency towards 2.1 grades is a great success for the surface learners and fulfils the purpose of this research project. But it does suggest that there is more to do to enable the deep learners to also make such radical improvements more consistently.

Reasons for creative change

The following reasons were given for the improvements overall:

• Clarity was fundamental; expectations were clear, students understood (even liked!) the learning outcomes and had not got confused.

• Different aspects of teaching and learning activities had encouraged a deep learning approach. The theme of the project itself was vital in inspiring them, but most importantly setting specific tasks had enabled them to focus on certain learning outcomes. Completing these tasks in a particular time frame had enabled them, especially surface learners to alter old patterns of behaviour meaning they could not leave work until the last minute.

• Feedback regarding assessment criteria suggested it was the most useful factor of all because they could use it to pinpoint weaknesses and push them to achieve better standards. This meant, several surface learners explained, they knew, "how to do a project". There was evidence that implicit knowledge had been exposed and shared.

Refer also to departmental notice boards

Intended learning outcomes (what you are expected to understand and be able to do)

Knowledge and understanding
- Identify, research and analyse an interesting subject matter
- Investigate, compare and contrast many different perspectives, interpretations and connections through research and development of ideas

Practice and Subject Specific Skills
- Generate multiple ideas from the knowledge gained above
- Translate ideas into visuals and test and select different media to find most suitable
- Consider the meaning and interpretation of visual elements to ensure communication

Key Transferable Skills
- Make critical evaluations of your work
- Communicate ideas to peers clearly verbally and visually

Assessment criteria (how well you have achieved the learning outcomes)

Choice of subject matter: *interesting? Unusual? Different perspective?*
Quality of research and investigation into subject: *superficial? Revealing? New connections?*
Ability to generate ideas: *Many? Few?*
Quality of ideas generation: *original? Seen before/safe?*
Ability to translate ideas into visuals: *idea better than visual? Enhanced?clumsy?*
Quality of execution, selection and handling of visual elements? *Tried lots of different approaches? Used the one felt safe with? inappropriate*

Suggested Information Sources

Timetable

Brief: Mon 10 April am
Select article and summarise by: Mon 10 April 4pm
Broaden research and initiate basic visual ideas by: Thurs 13 9.30am
Present developed visual ideas and pinpoint one for final development by: Fri 21 2pm
Final Crit: Fri 28 April 10AM

FIG. 3

Developing assessment criteria further could help with truly enhancing the abilities of the top students (Moon 2002), argues that learning outcomes can only describe a threshold level of achievement and that it is uniquely assessment criteria that can provide descriptions of 'excellent' work to compare and aspire to.

Learning outcomes = enhanced creativity

The evaluation of feedback demonstrates quite clearly the effect that constructive alignment has had not only on students' capacity to deepen their learning but the subsequent impact on enhancing their creative abilities. More importantly it has shown it can offer all students, but especially the surface learners, the opportunity to achieve their creative potential. By exposing the implicit processes that the 'more academic students use naturally' and presenting those explicitly as learning outcomes, it means 'less academic' students get to share this knowledge and access a level playing field.

On their own it appears the most learning outcomes can provide is clarity. It is only when students actively engage with them that they can begin to act as a guide through what to many is a fog, and alter students' learning approaches. Completing the circle by aligning assessment criteria means that students can measure their own progress and know what standard to aspire to.

I think fears that learning outcomes are stifling to creativity can be allayed, in fact the opposite is suggested: the more conceptual the project, the more effective the learning outcomes. But it does depend on them reflecting actual creative processes and in being divergent. Since these would simply be a transparent expression of what we wanted our students to learn in the first place, then this is a methodology to be readily accepted.

The more conceptual the project, the more effective the learning outcomes

student	fail	surface learning approach		deep learning approach	
		3rd	2.2	2.1	1st
1		●	■	×	
2		●	×	■	
3		■	● ×		
4		×	■		
5		●	×	■	
6			●	■ ×	
7			●	×	
8			×	● ■	
9		×	●	■	
10			●	■ ×	
11			●	■ ×	
12			●	■ ×	
13				■ ×	●
14				■ ×	●
15				● ■	×

● project 1
■ project 2
× project 3

grade after term 1 formative assessment

TABLE 1.

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STRAND A3: INTRODUCTION: RESEARCH AND SHAPING THE CURRICULUM

David Clews and Anne Boddington

The papers in this session raise issues around research in creative arts, design and media. In particular how discipline-based research harnesses creative practices and how research activities and knowledge are reinvested in shaping the curriculum.

Within the UK, the opportunity of undertaking a research degree for the art and design community only became possible following the inclusion of the subject fields within the academic degree-awarding system of the Council for National Academic Awards (CNAA). This occurred as recently as the early 1960s. Prior to 1992, most research degrees were awarded by universities, rather than through the CNAA and among the 100 PhDs awarded in the art and design field between 1976 and 1985, only 23 were from the CNAA. It was not until 1992 that awareness of the opportunity to engage in doctoral study became more widespread in art and design, when the former polytechnics, the home to many art and design schools, became part of the new university system and were given the power to award their own degrees.

In 1984 the CNAA noted the importance of research as a critical element of staff development; and that it was important for lecturers to be involved in research and related activities that infused teaching with a sense of critical enquiry. They saw such activities as including the following: "academic research, applied research, consultancy, professional practice, scholarship, creative work, curriculum and pedagogic research, and the development of applied, interdisciplinary and collaborative activities that are responsive to industrial and community needs".

By 1992, the rapid growth of creative activity being reported under the 'research and related activities' performance indicator of the CNAA was what was entered to the UK Research Assessment Exercise (RAE). This was not accepted by the CNAA as 'legitimate scholarly activity'

In 1992, Art & Design, as the "new kids on the research-block" (Brown et al, 2004), were the emergent saviours of the new universities and submitted a much higher than expected volume than initially predicted and, in so doing, generated significant income streams for several universities. Brown et al note that much of the activity reported at that 1992 Research Assessment Exercise related to applied work undertaken within professional or industrial contexts, and was the kind of activity generally described as 'professional practice'. Thus it was probably the sort of activity that the former CNAA might have described as 'related activities' rather than legitimate scholarly activity.

In 1993, Christopher Frayling, Rector of the Royal College of Art, applied Herbert Read's model of teaching for, through and into a discipline to the research agenda (Frayling, 1993, see also, Read, 1943). He noted that research could be for practice, as in Picasso gathering source material for the making of a painting such as Les Desmoiselles d'Avignon. Equally he described research through practice as being exemplified by the interactive processes of making a working prototype, testing and amending that model, and research into practice as including critical observations of practising artists at work.

The most prominent of this triad with reference to creative undergraduate education is research for practice.

Within this context there is a searching that forms an integral part of many creative processes, but the extent to which this becomes more than the gathering and compilation of material intended to stimulate studio work may be more questionable. Is this the same sort of intentional systematic data gathering or data generation undertaken in order to address a research question?

The collection of material indicates little about the capacity to organise, evaluate or interpret, although the counter-argument might be that it is the resulting art object that articulates this evaluation and interpretation. Frayling described the goal of this gathering of material as art, which might be considered as more about autobiography and personal development than necessarily about understanding and communicable knowledge.

Although there is considerable and growing work about the interrelationships between research and teaching (Hattie and Marsh, 1996, Jenkins et al, 2007), clear evidence has yet to emerge showing benefits to the students' learning experience. Anecdotal evidence suggests that the research record does impact on the potential students' choice of university; but also suggests that students often comment that their tutors are distracted from the business of teaching by their focus and the emphasis of the institution on research. In the UK there has been a significant growth in research activity within the arts and design community but there has equally been significant growth in the number of doctoral completions (see: www.shu.ac.uk). There is also a growing interest in how the research-like work, what Frayling would call research for practice, sustains both the work of teachers and practitioners as well as student learning. The Centre of Excellence in Teaching and Learning Through Design (CETLD), based at the University of Brighton, takes this as one of its central theses. The Centre and its partners at the Royal College of Art (RCA), London, The Victoria and Albert Museum (V&A) and the Royal Institute of British Architects (RIBA) have joined to specifically examine and capitalise on the work of teachers aiming to enhance design learning through, rather than about, design and do this through research for practice.

The four papers in this session explore differing aspects of the debates about research and the curriculum. Helen Gowerek's paper examines research activity of teacher practitioners - including her own - as well as the impact of this on their students' learning. And Stephen Felmingham's

paper discusses "a systems approach to creativity in art schools" and questions the emphasis in many policy instruments on individual creativity over the enhancement of environments in which creativity can thrive. Felmingham's paper offers an insight into how in the context of creative and performing arts, design and media, creativity and research might have explicit relationships.

As a counterpoint, Hilaire Graham describes how the newly constituted University College of the Creative Arts has developed an accredited diploma for teachers that focuses on their own disciplinary practice as the basis of scholarly work for supporting their teaching practice. The final paper in this group from Dr Luz del Carmen Vilchis Esquivel.offers a case study of a collective and collaborative research project that engaged students in the process of delivering research findings and outcomes that contributed to new curriculum materials.

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THE INTEGRATION OF PRIMARY RESEARCH INTO PROFESSIONAL PRACTICE WITHIN THE FASHION AND TEXTILE DESIGN CURRICULUM

Helen Goworek, Nottingham Trent University, UK

Abstract

This paper explores a pragmatic example of the relationship between research, learning and teaching in a design context. There are inherent difficulties in maintaining currency in practice after the design practitioner accepts a full-time lecturing post, due to the varying demands of the pedagogic role. Primary research was implemented by the author with the aim of increasing the researcher and students' awareness of contemporary practice, through inclusion of the findings in relevant modules. The paper intends to prompt discussion on methods of updating course content by encompassing primary research data within the curriculum.

Questions

- How can lecturers use research to maintain awareness of contemporary professional practice?
- How can research be combined with preparation and delivery of the curriculum?
- Does the use of research within the curriculum 'satisfy' or 'change' students?

Key words

Research, learning, teaching, fashion, practitioners, employability, curriculum development, textiles.

Introduction

This paper explores a pragmatic example of the relationship between research, learning and teaching in a design context. There are inherent difficulties in maintaining currency in design practice after the design practitioner accepts a full-time permanent lecturing post, due to the varying demands of the pedagogical role. The paper intends to raise questions about how research can keep teaching staff updated in their field and offers solutions on how to encompass primary research data within the curriculum. Primary research was implemented by the author during 2005 with the aim of increasing awareness of contemporary practice within the fashion and textiles industry, for the benefit of the researcher and students, through inclusion of the interview findings in various relevant modules in Nottingham Trent University School of Art and Design.

How can lecturers use research in learning and teaching methods to maintain awareness of contemporary professional practice?

Though the author had experience of professional practice within design and buying functions in the fashion industry prior to becoming an HE lecturer, the industry has changed rapidly in the last decade. This provided the inspiration behind the research, as there is no guarantee that the procedures, systems and equipment used in the 1990s remain applicable to today's industry. Carrying out secondary research is clearly standard practice for lecturers and students within both lecture-planning and project work, regarding

developments and trends in fashion and textiles, to inform and influence creative processes. However, much secondary research in fashion is limited to mass-media publications aimed primarily at consumer readership. To gain the views of industry insiders, the trade press, academic journals and outputs from research council-funded projects offer useful input, such as the recent work of Petre, Sharp and Johnson (2006) and Entwistle (2003). The fashion industry forms a significant component of the UK economy, with clothing and footwear sales achieving turnover of £44bn in 2005 (Key Note, 2006), yet fashion remains a relatively neglected area of design research. Barnard discusses the fact that there is "prejudice that fashion and textiles are not as serious or as important as other subjects" (1996, p.3) and this may partly explain the relative lack of peer-reviewed articles on fashion.

Books regarding fashion and textiles also offer insights into contemporary design practice, with publications by Gale and Kaur (2002), Waddell (2004), McKelvey and Munslow (2003), Tungate (2005), Kawamura (2005), Jackson and Shaw (2005) and Rivoli (2005) providing original material based on primary research into this industry. However, a proportion of the information in books can become outdated even before it becomes available to the reader, due to the timescale involved from manuscript completion to publication. The instantaneous nature of interviewing those actively involved in the lecturer's field of interest is therefore a distinct advantage. Though the interviews described in this paper were developed specifically for a book (Goworek, 2006a), it was possible for the author to use the interview findings as teaching materials as soon as they were completed.

Attending visiting lectures and industry conferences, setting live briefs with industry, and visits to relevant employers (with or without students) can be considered forms of primary research, and can all assist in enhancing the lecturer's awareness of current practice. Students can also be encouraged to carry out primary research for submission within projects or to be shared with other students during the module, inspired by their lecturers' use of research. One advantage is that, according to Brew and Boud (1995) "research is akin to the adoption of a deep approach to learning where learners take responsibility for their learning" (p. 36). Lecturers can gain the added bonus of learning from students' input, especially when a student's primary research is derived from work experience, offering a valuable insight into a company's activities. Fashion companies are intrinsically secretive about products and processes prior to their launch within stores. The lecturer is in a privileged position through being perceived by employers as an impartial individual, enabling the customary confidentiality to be disregarded. It is therefore possible for the lecturer to be allowed access to information from companies which would usually be inaccessible to professional practitioners working for competitors within the business.

Which factors have been subject to change in the fashion and textiles industry?

By definition, fashion is a constantly-changing cultural phenomenon and the rapidity of this change has accelerated in recent years. This acceleration can be attributed primarily to the significant impact of a variety of IT-based technological developments. Use of the internet and email has speeded up information exchange within the globalised fashion business. The level of imported fashion merchandise in the UK increased from 74% in 1999 (Key Note, 2000) to 95% in 2005 (Key Note 2006). This indicates the need for enhanced international lines of communication, to which the internet provides many viable solutions. Fashion product development can take place within a reduced timeframe due partly to the introduction of Computer-Aided-Design and digital printers, enabling fabric designs to be reproduced, recoloured and printed more quickly than traditional methods. Information about specific garment styles to be manufactured can be shared between retailers and suppliers via customised software and a secure intranet.

Research method

Case studies were compiled from semi-structured interviews conducted during 2005 with UK-based employees in the fashion and textiles industry, including:
- designers
- technologists
- visual merchandisers
- sales managers
- a technical manager
- an illustrator
- a buyer
- a merchandiser.

Selection of respondents

Two of the 18 respondents were NTU alumni, allowing opportunities for current students to see realistic future career opportunities presented to them. Ironically, one of the designers featured in the case studies on which this paper is based was unaware of the existence of her current role until after she graduated, and believed her "only career options were as a studio designer or lecturer".

Respondents were selected strategically from both the upmarket 'ready-to-wear' and mass-market levels of the fashion business, to highlight differences in practice between market sectors (Goworek, 2006b). Interviews were conducted with employees of retailers Liberty, Adams, River Island, New Look, French Connection, Harvey Nichols and Selfridges. An interview with the technical manager at Paul Smith provided an insight into the operation of a UK-based designer company and employees of clothing manufacturers supplying Marks and Spencer discussed the relationship between retailers and suppliers within their roles. The sample group contained a range of different levels of responsibility, from trainee up to manager.

Interview types and content

A set of generic questions was developed for the interviews, covering the respondents' career paths, their main responsibilities, subject-specific and transferable skills relevant to their current roles and interdepartmental liaison. As product development processes differ between the upper and mass market sectors of the fashion industry, the questions were adapted specifically to market level and role of each respondent. A flexible range of interview types was required to accommodate the varying schedules of the respondents and several of the interviews consisted of a combination of face-to-face interviews, telephone interviews and email responses to interview questions.

How can research be combined with preparation and delivery of the curriculum?

The interviews overlapped with the timing and content of lecture and seminar planning of the modules within which the findings were used. The curriculum of a BA (Hons) Fashion Design module formed the basis of much of the content for 'Careers in Fashion and Textiles' and the case studies derived from the interviews were used in three modules at NTU:

- 'Buying and Global Sourcing' elective option for second year undergraduates in Fashion Design, Textile Design and Fashion Knitwear Design
- 'Colour and Careers' module for first year Fashion Design undergraduates
- 'Fashion Environment' module for first year Fashion Marketing and Communication undergraduates.

They were delivered to the students via the following methods:

- Summaries of case study content in formal lectures
- Supplementary reading accessible to students on the relevant module's section of the NTU intranet
- Handouts of the case studies in seminars as topics for student discussion groups.

Does the use of research within the curriculum 'satisfy' or 'change' students?

In relation to the debate about whether the purpose of HE is to 'satisfy' students or to 'change' them, arguably it is possible to achieve both of these aims, demonstrated by the example described in this paper. The satisfaction of fashion and textiles students' educational needs can be met in part by the delivery of information concerning the content of possible career options, as the course of study is often viewed as a means to an end in career terms, by those studying vocational courses. Employability is a fundamental feature of NTU policy and the development of vocational curricula is encouraged. A clear view of relevant future career roles and the major responsibilities involved may encourage students to discard their original ambitions and aspire to other routes, to which they have been alerted via curriculum content. The opinions and attitudes of students may change as a result of exposure to primary research into potential job roles, as evidenced by students' feedback forms about modules.

Conclusion

The paper demonstrates how primary research by lecturers can be utilised within the curriculum, which is of particular relevance to the rapidly-changing fashion industry. Interviews with professional practitioners were utilised in the examples in this paper and there is scope to explore how other research methods could be used to update lecturers' and students' knowledge of professional practice.

With imports approaching 100% and the current speed of technological developments in the UK fashion market, creative roles require increasingly flexible, diverse knowledge and skills, which could influence the content of individual modules and the types of HE courses demanded by two groups of our major stakeholders: students and employers. This demand can potentially be met by a flexible and diverse approach to curriculum development enhanced by primary research carried out by the lecturers and students involved in the module.

A longitudinal study of respondents in industry could be proposed to track changes at regular intervals, a suggestion incorporated within Lauche's research into design practice (2005). The feasibility of lecturers and students carrying out joint primary research into professional practice could be explored, within the same university or from the same design specialism in different educational institutions. This would offer the added benefit of a deep approach to students' learning. The possibility of constructing an online database of primary research in art and design could also be investigated, through collaboration between art and design lecturers.

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BUILDING NEW PARADIGMS:
THE ART SCHOOL AS A SITE FOR CREATIVITY RESEARCH

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Abstract

This paper seeks to clarify areas of creativity research relevant to Art and Design institutions. By questioning research that focuses on individual creativity, the paper considers a systems approach to creativity in art schools as a first step towards understanding its nature. With the prevalence of outcome-led and empirical assessment and at a time of considerable change for specialist art schools in the UK, it argues for the unique place of the art school and for change towards a culture that is more valuing of students' creative development.

Questions

- "Creativity is not an attribute of individuals but of social systems making judgements about individuals" (Csikszentmihaly, 1996). Does systems theory reflect an overly hierachical model of creativity?
- If the 'field' in systems theory represents the 'social and cultural aspects of the profession' is there sufficient emphasis on the idea of the teacher/practitioner in art schools especially in the FE sector?
- What lessons can be drawn for the wider field of higher education from a study of creativity in art schools?

Key words

Creativity, cognitive styles, systems theory, Mihaly Csikszentmihaly, pragmatic, adaptor, innovator

Introduction

Despite a history which stretches back to the 1920s, modern research into creativity has not produced one outlook sufficiently widely accepted to serve as a unifying theory (Beattie, 2000). Its effects are all around us; it is a fundamental part of the human condition and possibly was the pre-eminent driver for our development from primitive apes. Yet we still have no unifying theory of what creativity actually is, nor any standardised way of measuring it. I will be examining some current theories of creativity in order to form a possible model of what it might be before asking how these theories apply to the art school. There are more than nine separate theories relating to creativity – I intend to focus on three that seem to have particular relevance to art and design education.

Creative strategies

By far the best-known approach to creativity is that which champions its development rather than research into its nature. This is characterised by a pragmatic or commercial approach which builds on what is known about the causes and effects of creativity and attempts to construct this into a usable model that can be taught. Work by Edward de Bono in the 1970s, 80s and 90s has spawned a growing industry in teaching people to be creative, largely as a response to the changes in business environments mentioned above, but also designed to be used in a teaching and learning environment. Geoff Petty's How to be Better at Creativity (1997) describes a system which can be applied to a learning environment through the mnemonic ICEDIP and a process which involves Inspiration, Clarification, Distillation, Incubation, Perspiration and Evaluation. This is a variation on early work by Helmholtz (1896) and Graham Wallas' system of 1926 which uses a similar progression: Idea, Germination, Knowledge Accumulation, Incubation, Illumination and Verification.

The pragmatic theory of creativity can allow an inclusive and democratic approach within both education and business environments – all participants are allowed to feel creative within a

Work by Edward de Bono… has spawned a growing industry in teaching people to be creative

modular system which reflects a variety of mindsets, from 'natural researchers' to those who thrive in 'blue-sky thinking'. The creativity industry is also endlessly creative when it comes to alternative and novel systems, perhaps giving an evangelical zeal to some of the more extrovert practitioners and reinforcing the idea that it is in itself a money-making industry. It is no surprise that the teaching of creative strategies within the education sector has drawn so much of its inspiration from this approach: it lends itself to an off-the-shelf, turnkey solution to motivating students and providing opportunities to explore feelings and develop new skills. The system has largely grown from economic business necessity, which mirrors perhaps the growth of this realpolitik approach within the education system itself.

Cognitive styles

The cognitive theory sets out a rational and problem-solving approach when dealing with creativity. It is closely allied to the pragmatic approach detailed above, again based on the Helmholtz/Wallas model. Research into "cognitive styles" (Kirton, 1976) has attempted to discover what kinds of creativity techniques work best with which kind of people and under what circumstances. It is in effect looking beneath the pragmatic approach and moving towards an understanding of why individuals approach problems in different ways, particularly in a group situation. Cognitive styles refer to an individual's typical mode of thinking, which "cuts across diverse spheres of behaviour" (Messick, 1976) and which are relatively stable over time. Kirton (1976) identified a personality continuum which he called Adaptor-Innovator, which reflects two very different approaches to creativity. In this the adaptor is characterised by precision, reliability, conformity, and the use of convergent thinking; the adaptor reduces problems by improvement and bringing

greater efficiency. The innovator, however, prefers to challenge the prevailing structures; is sometimes seen as undisciplined and often solves problems by breaking down patterns and doing things in a different way using divergent thinking.

It is important to realise that the cognitive style theory is not an either-or situation – individuals can possess varying degrees of both styles with a preference for either 'adaptiveness' or 'innovativeness' whilst exhibiting behaviour consistent with their preferred style. Kirton believes that these cognitive styles are found in everyone and that they play a role in creativity, problem solving and decision-making resulting in an "engaged state of being". This could be contrasted with disengaged or passive styles of learning that lead to mere reproduction of information or rote-learning. Kirton maintains that both adaptive and innovative styles lead to similar levels of creativity, although historically the innovators have been seen by society as "the most obviously creative" (for instance, innovators gave us the aeroplane, but adaptors have allowed regular and reliable air transport to evolve). Innovative creativity breaks down paradigms and establishes new ones, while adaptive creativity can improve upon the current one.

By valuing both cognitive styles in the learning environment, the attributes of both can be enhanced. Through an atmosphere of openness and trust both styles can be shown to have importance in the development of ideas and the growth of a project. In the context of art and design education the innovative style would seem to dominate our perception of how original ideas and new concepts are arrived at. The risk is that the 'undesirable' aspects of this style such as 'insensitivity' and 'threat to group cohesion' can lead to difficulties in a group situation. A feature of cognitive theory, as in the pragmatic approach, is that it emphasises the idea that an individual level of creative potential can be increased through formal training.

Systems theory

The inevitable focus of the cognitive theory on individual attributes, when thinking about what creativity may be, leaves unresolved areas as far as art and design education is concerned. By far the most satisfactory model for this area is the confluent or systems approach, which emphasises the interaction of different forces within creativity.

This research introduces a new post-modern paradigm for thinking about creativity which removes it from a process existing in a single person at a particular time, instead placing it in a complex social system of opposing and related forces. The work of Mihaly Csikszentmihaly is key here, amongst other researchers (Feldman, Gardener et al). Interestingly Csikszentmihaly does not ask "What is creativity?" but rather "Where is creativity?", arguing that only when we have answered this question can we begin to define it adequately.

The common model in an art school institution teaching contemporary art practice contains a series of groupings – the taught group (undergraduates), staff members (also commonly practising artists) and a context which reaches out to contemporary practice in its widest sense. The systems approach looks at creativity as a concept resulting from the interaction of a field, a domain and an individual. Here the field is defined as the "social and cultural aspects of a profession or job" (Feldman et al (eds), 1994). In the case of the arts this would be artists, curators, museum administrators and so on, whilst in the closed system of the art school the field is represented by the teachers and their connections to the outside art world. The field "recognises, preserves and remembers the creative endeavour" (Csikszentmihaly, 1996). The domain is the structure formed by the field and is a formal organisation of the body of knowledge and is a "set of symbolic rules and procedures" (Csikszentmihaly, 1996). In the art school model the domain has its corollary in the art world outside the school, with its norms and conventions, however unconventional these may be. Finally the individual is the "site of the acquisition, organisation and transformation of knowledge which has the possibility of changing domains and fields" (Feldman, 1994).

The three elements relate to one another in a dynamic way: the domain, as the body of knowledge, transmits learning to the individual who by understanding the rules and by creatively adapting them produces a variation in them; the field selects the variation and passes it back to the domain. The cycle repeats itself with a new generation receiving the new altered domain. Csikszentmihaly (1994) defines an "unqualifiedly creative person (as someone) whose thoughts or actions change the domain, or establish a new domain" and that thereby "creativity is not an attribute of individuals but of social systems making judgements about individuals". This is an ideal model, using as its example the creative individual at the height of their powers who is capable of altering a world view or accepted practice. In the context of the learning environment, the cycle should be applied to the student experience in so far as it operates within the understanding of the student, that is, the teacher operates as 'gate-keeper' for the domain allowing the student to deal with the existing domain through a system of modules or via modelling strategies. Current research, as well, shows that "creativity is domain-specific" (Baer, 1993), relying on a sufficient grasp of knowledge of a domain for it to act as a basis of creativity.

Conclusion

The systems approach presents a provocative and radical view of creativity in its own right. It could be argued that the art school system, as it has operated up to the present, is a unique expression of this theory. It continues to employ teachers who regard themselves as practitioners; it regards the use of student and peer criticism as a key tool in the conferment of knowledge; it sees the holding of a position and understanding of that position to be of paramount importance; and sees its business as being the teaching of creativity through a broad-based arts education, over that of creative production per se. Epstein (1990) states that "because products are continuously being edited and rejected as the creator self-assesses them, they are of necessity a poor index of the creative process".

However, the growth of a culture of outcome-led assessment and by default an attempt to measure

Art schools… rely on a view of creativity rooted in process, investigation and the actualisation of the individual

Innovative creativity breaks down paradigms and establishes new ones, while adaptive creativity can improve upon the current one

the creativity of an individual through their creative products is threatening what Irit Rogoff (2006) calls "this unstable pedagogy". Art schools, as sites of critical engagement between practising artists and students active in testing out new methodologies and modes of practice, rely on a view of creativity rooted in process, investigation and the actualisation of the individual. It is against a background of the 'professionalisation' of the creative industries, now providing a far greater range of destinations for students than ever before, that the more reflective and less outcome-based model of art education is in danger of being lost. In answer to Csikszentmihaly, the 'where' of creativity seems to lie in the congruence of social forces operating in the delicate ecological balance of the art school. By acknowledging this, we will be in a better position to build structures of teaching, learning and assessment as alternatives to the bureaucracy that is now overwhelming us.

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CREATING A NEW POST-GRADUATE CERTIFICATE:
LEARNING AND TEACHING IN THE CREATIVE ARTS

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Abstract

This paper considers the development of a new academic development course in teaching and learning in the creative arts. It describes the context for such a course; any requirements for accreditation; its impact on professional development; and the nature of the curriculum of such a course in the creative arts. It proposes that teaching and learning in the creative arts are much more aligned to an experiential learning process and that this provides a model for structuring a professional development course.

Questions

- When we join universities we bring our specialist subject/discipline. How can we balance this professional position of our discipline with the new professional discipline of being a teacher?
- What comes first: the pedagogy of teaching and learning or the practice of teaching and learning in the creative arts?
- How can enhancing teaching and learning practice through professional development in teaching and learning enhance the student learning experience?

Key words

Creativity; experiential learning; professional development; student learning; teaching practice.

Introduction: an independent identity

The Post Graduate Certificate (PGC) Learning and Teaching in the Creative Arts acknowledges and supports the University College's strategic objectives to realise the potential of our staff and promote high standards of academic excellence (UCCA, 2006a).

It addresses institutional learning and teaching priorities with regard to investing in staff (potential course participants) and their personal development, enhancing the quality of the student experience and the quality of learning and teaching.

The PGC addresses the training and development requirements identified for new and existing staff (as course participants) within the University College Teaching Learning and Assessment Strategy (UCCA 2006b). The key aspect of the course is the focus on the creative arts and the application and consideration of teaching and learning pedagogy in that context.

Background: an education context

Improving teaching, developing professionalism in teaching and learning, linking discipline research and teaching are key issues for educational institutions. These concerns are articulated by Paul Ramsden (2003, pp.3-4). This is partly because of external pressures: to do more with less; to be more accountable; to enhance the quality of teaching. Ramsden goes on to suggest that we can improve our teaching by understanding student learning (Ramsden, 2003, p.6).

The specialist in teaching and learning in higher education is a relatively new phenomenon (Light, 2005, p.10), one that reflects the demands being placed on educational institutions. Light goes on to propose that the call 'to' professionalism provides the opportunity of a new way of thinking which is both a call to change and a call to ongoing reflection about excellence and transformation in teaching and learning practice (Light, 2005, p.11). Developing teaching is about awareness of professional practice; about changing practice and personal development as professionals (Kahn and Walsh, 2006, p.1).

Underpinning the quest for professionalism in teaching and learning is a conceptual shift (Light, 2005, p.9) from the tradition of teaching as delivering knowledge to a concept of teaching as developing and fostering students' independence of teaching.

The demands of research are also significant for institutions. Brew in considering the relationship of teaching and research proposes a scholarly approach. She suggests that teaching is becoming more like a process of inquiry and that research itself is becoming more like inquiry-based learning (Brew, 2006, pp.3-4). This inquiry-based process provides a substantial framework for creating a course in teaching and learning.

The PGC proposal responds to the concerns raised by Ramsden, Light et al. It seeks to be student centred, both for the participants and for their inquiry about student learning; it seeks to be professional; it seeks to be inquiry-based, to develop a curiosity about teaching and learning practice, in the creative arts. But above all the PGC seeks to be creative, to reflect the innate nature of the disciplines within the creative arts.

Pragmatically, this PGC responds to the requirement (DfES, 2006) for all new academics to have a teaching qualification. As well, the PGC responds to the sector trend for institutions to provide an in-house professional training programme, at Masters level.

Accreditation: an institutional requirement

This course supports staff teaching in both FE and HE. This reflects institutional aspirations to increase the number of qualified or recognised teaching and learning practitioners in both academic and academic support staff.

The course is accredited by the Higher Education Academy (HEA) with respect to the Professional Standards Framework (for HE teachers) and UCCA is in the process of seeking accreditation from Standards Verification UK (SVUK) with respect to the Overarching Professional Standards for teachers, tutors and trainers in the Lifelong Learning Sector (Lifelong Learning 2006) (for FE teachers). Meeting two accreditation requirements has required a creative approach to the framing of knowledge, teaching and learning activities and professional values to make explicit how these are addressed in the PGC.

Realising staff potential: UCCA professional development

Creativity is evident in all that we do at the University College for the Creative Arts (UCCA, 2006a) and is embedded in the PGC. A concept of creative academic development underpins the PGC, challenging existing practice and considering innovative practice in striving for excellence in teaching and learning. This is made evident through the assessment activities completed by participants. The PGC develops the unique characteristics of the pedagogy of the creative arts and enables participant staff to understand and enhance the distinctive nature of their students' learning experience in this context. The course incorporates wider teaching and learning issues within the post-compulsory education sector together with substantial coverage of further and higher education to situate teaching and learning practice in a pedagogic context.

The PGC forms the platform for continuing professional development in UCCA. PGC activities such as the development project presentations contribute to the Continuous Professional Development (CPD) programme for academic staff in teaching and learning.

Distinctive features: reflecting the creative arts

In creating this course, the experience of participants in their creative arts discipline was a key element to creating a framework that integrates generic teaching and learning pedagogy with the unique characteristics of the pedagogy of the creative arts. This approach is similar to that of the Oxford Diploma in Learning and Teaching in Higher Education which is "designed on the principle that the best university teaching emerges from academics' own understandings of how students learn in their discipline" (Ramsden, 2003, p.247). The need to recognise specific subject qualities has been highlighted by the HEA which has developed discipline-specific resources particularly aimed at new academic staff (HEA, 2007). Some HEA accredited PGCs such as that at the University of Plymouth make provision for subjects through specific discipline-based units (EDALT 2005). Accordingly, the UCCA PGC draws key examples of good practice and case studies in the creative arts from courses and academics within the University College, and values the current teaching activities of participants who

bring a diverse range of work and practice experience to share from both FE and HE.

The PGC uses online technology to support teaching and learning in order to enhance the participant learning experience and to enable implementation in teaching practice with participant's student cohorts. It also links research and teaching through scholarly explorations of teaching and learning practice and supports participants with a mentor to provide teaching practice support. Mentors are drawn from academic staff and complete mentor training in line with the UCCA Mentoring Policy (UCCA, 2007). Mentors complete a peer observation of their participant and attend participant presentations of development projects.

The PGC is aligned with the core knowledge areas of teaching and learning and the professional values of Lifelong Learning UK (FE – Further Education) and the Professional Standards Framework (HE – Higher Education).

Course aims
Teaching philosophy: reflecting creative arts teaching and learning practice

The course aims to be student-centred so that participants become increasingly autonomous as they become more familiar with the content. The learning opportunities in the course reflect student diversity by offering alternative practices or models of teaching, learning and assessment to create a learning environment where participants are encouraged to experiment and innovate, and take responsibility for their own learning and development.

This course asks participants to consider and reflect on what they need to learn and what they already know; it develops collaborative learning and encourages deep learning through self-directed study; it considers what participants do outside of class time (work, further study, creative practice) and support for student diversity.

The course integrates theory and practice by introducing pedagogy described in the educational literature and considering teaching practice through participants' own experience so that participants can relate theory and practice to the needs of the discipline area and of their own students.

The course focuses on developing pedagogy in the creative arts in a scholarly manner; using the

generic theory as appropriate to explore the creative arts in the participants' course activities, assessment tasks and through the work-based activities to deliver research outcomes.

FE and HE participants are encouraged to work collaboratively to focus their assessment activities in order to achieve appropriate professional recognition. Assessment is focused on developing critical and analytic skills of education context, learning activities and situations, and professional development within a creative arts pedagogic framework.

The structure of the various learning activities is underpinned by a cycle of experiential learning (which is relevant to creative arts practice): where the participants are involved in doing an activity, reflecting on it, relating their awareness to a theoretical framework and then using this to develop new and creative ways of approaching their own teaching, learning and assessment practice. An outcome of the assessment activities is the development of a research culture in teaching and learning by experimenting with research methods and inquiries.

Developing a teaching and learning curriculum for the creative arts

This course
- develops participants' understanding of the principles and processes involved in teaching and learning in the creative arts within the context of further and higher education
- provides opportunities for participants to explore relevant pedagogic research in this area
- develops participants' awareness of their ability to select and use appropriate and effective teaching, learning and assessment methods in the context within which they are working
- provides opportunities for participants to develop and demonstrate their teaching practice
- enhances participants' understanding of the theory and practice of being a reflective practitioner.

The course ensures that the learning outcomes, learning processes/activities, assessment mode and criteria are constructively aligned to create a learning system that links the aims, outcomes, level of study, the content and sequence of learning, teaching modes and assessment design, student support, learning resources and methods of evaluation; and that these

reflect the teaching and learning practice of the creative arts discipline. The exploration of course design presents an opportunity to embed activities relevant to creative arts practice in course materials.

The curriculum focuses on teaching and learning issues (including curriculum development, approaches to teaching, how students learn, assessment, diversity, monitoring and evaluation) of generic and subject- specific interest to both FE and HE staff to meet the relevant professional requirements.

Conclusion

Teaching and learning in the creative arts are much more aligned to an experiential learning process (Kolb, 1984) for both teachers and students, than a process of telling information (though there is a need for some of this). Teachers are often facilitators; students are often collaborators. The collaborative and yet independent practice of the creative arts practitioner is centred in the 'studio' as the principal learning situation. The discovery of knowledge both appropriate and relevant to studio activities underpins the experimentation and inquiry that creates a design process, resulting in creative outputs.

The UCCA PGC Learning and Teaching in the Creative Arts provides an opportunity for describing approaches to developing teaching and learning practice in the creative arts disciplines. The questions that have been explored include: the distinctiveness of the creative arts in teaching and learning and the subsequent impact on curriculum; the nature of teaching and learning practice in the creative arts and the subsequent development of a teaching philosophy for the course that both models and reflects innovative practice; and the implementation of institutional requirements such as accreditation and professional development in a framework that challenges teaching professionals to "do better things" (Elton, 2006).

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RESEARCHING A CENTURY OF GRAPHIC DESIGN HISTORY IN MEXICO

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Abstract

Based on a particular research method, a group of professors from the National School of Visual Arts began the project 'Mexico in Graphic Design: the visual signs of a century'. This project seemed like an impossible task due to its extension (100 years) and the absence of previous research with these objectives.

Almost 200 students collaborated on this project and all of them finished their theses. This work allowed an exhibition with graphic design objects from a century, accompanied by a reflection on each period and one month of conferences, public classes and interviews on several topics.

Questions

- What was the model research structure used?
- Can you describe the benefits of this work for learning, researching and teaching?
- What was the students' attitude?

Key words

Research, graphic design, method, structure, history, knowledge, reflection.

Project origins and subject of study

A teaching, research and dissemination project on the topic of Mexico in graphic design: the visual signs of a century, as a discipline of design, arises from an idea that gains form. The difference is that graphic design always finds its determinants and compositive space in the format, whereas research and teaching have their qualitative and temporary factors, which they expand in directly proportional terms at the levels of depth with which these sources are revised, and this is meditated in their concepts.

Graphic design in Mexico has a very interesting history, whose past forces a deep reflection on its complex development conditions. Because these complex conditions influence aesthetic thought and socio-cultural moments defining collections of designed objects and visual trends, they effect the relationships between fine art practice and graphic design. There is an acknowledgement that the study of graphic design is a valuable practice. However, the history, theory and criticism of design are still insufficiently promoted as subjects of study in their own right (Margolin, 1989).

The above-mentioned cannot ignore a form of thinking, to conceive and to consider the discipline, marking lines of knowledge, definition, classification and understanding. These are all fundamental indicators for any researcher who perceives vast and diverse graphic information on which decisions must be made in order to register and gather the aspects, moments and significant examples of one year or one decade.

The structure of a project like this is not solved with hard data: experience, knowledge of history, and dominion of the referents are the moments of decision that marked step-by-step the road travelled by 12 academics and almost 200 students from the National School of Visual Arts of the National Autonomous University of Mexico.

The result was the most important exhibition of its kind so far in Mexico, integrating nearly 1,000 graphic design objects with academic and professional descriptive identification, timelines of antecedents - divided into five periods of two decades each. The project's identity design, stationery, applications, posters, identifications, room identifications, promotional materials and a catalogue are only a small sample of the output of many discussions, tests, errors and also many successes. The most important success being working eagerly on

professor Vicente Rojo's expressed idea: to interpret the landmarks of a century of graphic design history in Mexico. Understanding, as did professor Rojo, that design is an art and that one must look at it as such; that it is an applied art; an art that has to be needed; that has to show qualities at different levels in a short distance; that needs to be done in a short time and demonstrate its effectiveness practically at once. The graphic designer has to carry out an informative, formative and communicative function.

For everybody participating in this project, sense became the strongest concept, a domain of the core and being of the designer, a confirmation of his vocation. All of us who participated, academics and students, learned to speak differently about graphic design, to enlarge and consolidate our pride for our profession, and to know that we are worthy of a millennial inheritance whose vocation for the graphic communication and the creation of a visual imagery requires an academic effort that only the university spirit is able to undertake: to explain the testimony of the countless vestiges of the history of Mexican graphic design.

First stage: research method and formation of work teams

The first step was the formation of a professors' work team to discuss and decide upon a specific research method that would adapt to the project conditions, choosing the model that has been followed by the Research Seminar Postgraduate Programme. This method transcends the traditional models that come from natural and social sciences that usually begin with the research protocol and focus on the hypothesis. Instead, one works based on propositions and conceptual structures, directly in the actions of researching, teaching and learning, considering as a foundation, in this case, a theory of design based

on the idea of discourses, genres and visual texts sustained in grammar and visual common language.

When dealing with a research referring to history, with interdisciplinary help, the historicist work method was chosen as a model to study and research. Basic texts on the history of Mexico were also chosen in order to consider similar knowledge in this aspect.

On this basis and after preliminary research, it was decided to fragment the project into six chronological sections: antecedents, 1900-1919, 1920-1939, 1940-1959, 1960-1979 and 1980-2000. During this stage, exhaustive research was conducted to form timelines of each period, in which outstanding aspects of each time were specified regarding national graphic design, international graphic design, plastic arts, other arts, stylistics, national and international events, scientific discoveries and technological innovations.

Our further investigations followed this plan. So we already had a topic, title, defined purpose, objectives, methods, conceptual structure, outline, work strategy, research sources and calendar.

Once a decision was made regarding the common denominators, a summons was issued to senior graphic design students who were enrolled in a qualification seminar or who needed to complete their social service (social service is the work done by Mexican students as an essential condition to finishing school and obtaining a university degree). The summons got a huge and immediate response since active participation in such a research project based on acquired knowledge, gathered information and with help from the professors' would contribute to obtaining qualifications.

So 180 students registered on the project, in three work stages, each lasting six months, by the end of which they all completed their university degree

All of us who participated, academics and students, learned to speak differently about graphic design

theses and carried out their qualification exam.

The first stage required reading and reflection by the students with their co-ordinators, forming eight work and discussion groups with a common calendar.

Second stage: compilation of information and data organisation

Once everyone was fully briefed, the search for information began. First, all the people and institutions that are in some way or another related to the history of graphic design were located: retired and active designers, design offices, printing houses, libraries, private collections, public collections, the national archive. Data for each person and place were recorded in a specially designed fashion.

Later, each student developed, based on a topic on the discourses and genres of graphic design, a particular research subject that, including two decades of the 20th century, integrated all the relative information, both documentary and visual. This involved visiting designers or those responsible for the sites, and obtaining specific data in special documents for the recording of documentary, bibliographic, iconographic, audiographic or videographic sources and original objects of graphic design.

Each of these compilations was preceded by documentary research that allowed determining characteristics, context and period in which a certain design style was developed.

The main epistemological axes were:
1 Design concept
2. Visual text: syntax (message configuration), semantics (message content), and pragmatics (message reception and sense)
3. Discourses: advertising, propagandistic, educational, plastic and ornamental
4 Genres: editorial, paraeditorial, extraeditorial, informative, indicative, ornamental, linear narrative and non-linear narrative
5. Codes: morphologic, chromatic, typographic, and photographic (Vilchis, 2002)

These typologies allow a realistic approach to combining knowledge and to determine this discourse without ignoring the affective conditions that go together with any knowledge. The organisation was done in a partial way because it was possible to consider the issues of the research schemes in an isolated manner; however, for the material exhibition, a structure updated with the existing material was devised, this way reproducing the samples' format.

It was about interpreting the designed and not the image as if it were an isolated and inert element; it was about the expressive coherence in which a complex of codes transcends the merely perceptive phenomenon and supposes the integration of a meaningful reading.

The work included the interpretation of designed objects, a reflection on their nature and meaning, which was part of the semiotics process that needs to be figured from the complexity of its codes, from its specific language.

In that which is designed, no sign is isolated, nor is it more important, nor is it integrated as information fixed visually in a two-dimensional support, it is part of a sense constellation that constitutes the field of the visual experience.

Third stage: partial conclusions and resulting exhibition

The exhibition, as a partial research project report, gathered in eight rooms two presentation documents, seven timelines, 12 conceptual documents, and around 1,000 objects, with the direct participation of 120 students, 18 professors, 20 curators and museographers, 40 institutions who lent from their collections, and most importantly, the integration of a "teaching, learning and research experience of dimensions that require pedagogic sustenance, didactic dynamics, investigation method, operation logistics and a project".

Having an idea - "without an idea there is no design", according to Paul Rand (Steiner, 1997) - sharing with the group, looking deeply into specific knowledge as a reason to look for information and to generate knowledge based on a systematised model, perceiving in a tangible form the results and knowledge, and personally knowing the benefits, added up to an exemplary academic experience. According to Comenius (Rajlich, 1997), education should be based on a thought-out method, with a natural and spontaneous programme that cultivates the senses and the intellect; I believe that this project fulfils these requirements.

However, the most important thing in the entire project was the significant change in people. Their form of speaking and thinking about their profession of graphic design changed radically because they gave a structure to their ideas, they appropriated their own semantic field and they appreciated the wealth of design produced in Mexico. Thinking of graphic design in a professional level will lead each and every one of them to design on a professional manner.

The project 'Mexico in graphic design: the visual signs of a century' has been an identity, a symbolic front for students and professors in the National School of Visual Arts that speaks of what can be achieved with a single idea based, developed, integrated and conducted with the interdisciplinary participation of the members of a team, thus coinciding with Müller-Brockmann in that "whichever the information, it should reflect, ethically and culturally, its responsibility with the society to which it is directed".

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DAY 1

STRAND B1: Virtual and online learning

STRAND B2: Inclusivity

STRAND B3: Critical and creative practices

STRAND B1: INTRODUCTION: VIRTUAL AND ONLINE LEARNING

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The impact of e-learning has been felt across all areas and levels of education in recent years, with the art, design and media sector no exception. However, it is only recently that in-depth consideration has been given to how virtual and online learning can match the needs of specialist pedagogies and practices. Addressing the challenges presented to e-learning by practice-oriented disciplines has resulted in these fields generating their own creative solutions to the problem. As the papers in this section show, these solutions have the potential to reconfigure e-pedagogies in ways that support practice and creative innovation, and to make significant contributions to developing new strategies for technology-supported learning. There are good reasons for believing that these discipline domains can and should take a lead in the design and development of e-learning, and that innovations such as those described here will be of wider relevance in the future.

The research background to virtual and online learning has focused on a number of key issues, many of which are mirrored in the papers in this section. These include: the problem of developing robust models of e-learning; how users' dispositions towards technologies can affect learning; the challenges and potential offered by collaboration; and the impact of ICT on specialist skills and processes.

A critical review of the potential of e-learning is undertaken by Mayes and de Freitas (2004), in which they offer a framework for understanding e-learning and a means of reconsidering pedagogy for technology-rich contexts. These broad educational concerns have aspects of particular relevance to art, design and media domains; for example, the authors consider the aspiration to provide "authentic contexts" for e-learning as particularly useful, and emphasise that this has the potential to privilege "personal over canonical perspectives" on knowledge (op cit, p 6). It is also interesting that the writers' description of the main functions of technology in such contexts replicates a central activity of art, design and media learning:

> *"Technology enables learners to represent their thinking in concrete ways and to visualise and test the consequences of their reasoning."* (op cit, p. 15).

Learner engagement is now recognised to be closely related to issues of 'affect' and to how individuals 'feel' about their learning. In terms of e-learning, Salmon's question: "How can teachers and learners use technologies happily?" (Salmon, 2003) has become increasingly important, and the 'happiness' factor in e-learning has been investigated in several studies. Shaw et al's (2002) survey of Scottish art tutors concludes that the distinctiveness of their domain involves several factors precluding ready acceptance of technology. These include tutors' unease about the role of computers, under-investment in technologies and the absence of co-ordinated staff development programmes.

An investigation into the views of art and design teachers in English schools (Wood, 2004) found strong dissatisfaction with levels of resourcing for their subjects. There were also fears that new technologies were "displacing time-honoured skills" (ibid) and that the mode of learning that operates through processes of making might be downgraded. Another study records the differing levels of ICT expertise that learners and tutors bring to art, design and media education (Logan et al, 2007); key findings here related to staff and learner training needs, new skills required for the digital age and the aspirations and fears of those involved.

The potential of collaborative e-learning is the focus of McCormick's (2004) review of current research on design and technology education, and he concludes that in order to realise this we need to revise existing pedagogic techniques. McCormick views the higher

education context as well covered in the research literature that describes collaboration by students with design profession destinations: he cites Wojtowics (1995), Maher, Simoff and Cicognani (2000), Turner and Cross (2000) and Garner and Hodgson (2003), and notes that attempts are being made to develop a good theory of collaborative design.

The literature considering the impact of ICT on specialist art, design and media skills is a growing field. Coyne et al (2002) review ten years of technological change in graphic design, and Schenk (2005) considers the role of drawing in contemporary design curricula. Schenk found substantive reduction in the importance of drawing, particularly in newer design disciplines, with 'other' disciplinary knowledge such as maths and computer studies increasingly required. She also concluded that increasing emphasis was placed on 'intellectual' over 'practical' skills, substantiating Wood's (op cit) similar conclusion.

The papers in this section provide four distinct approaches to the use of e-learning. Jane Scott's project focuses on technology as an aid to visualisation for textile students, with key insights into the ways in which it can support and develop traditional and non-traditional design skills and the creative process. David MacWilliam and Renee Van Halm describe the challenges of changing from studio-based teaching to engagement in creative online communities, while Chris Mitchell investigates the importance of learner identity in promoting engagement with online education in art and design. Andrew Taylor and Ertu Unver describe how the creation of virtual environments using animation software can extend the traditional, physical learning space and review the implications for revised pedagogical practice.

There are several shared themes amongst these papers, many of which are also evident in the wider literature. The key issues brought to our attention include: the importance of learner identity and engagement for e-learning that supports the creative process; the new freedoms provided in virtual and online environments, including the representational power of ICT; and the ongoing revisions of our specialist pedagogies needed for the digital age.

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AN INVESTIGATION INTO WHY STUDENTS STRUGGLE TO VISUALISE FABRIC OUTCOMES FROM CONSTITUENT YARNS:

CAN TECHNOLOGY (WITH REFERENCE TO CAD/CAM SYSTEMS) HELP TO IMPROVE VISUALISATION SKILLS?

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Abstract

This paper examines a project currently running within the School of Design at The University of Leeds, which aims to investigate the role of CAD/CAM technologies in enhancing the creative process of knitted fabric design. The current project aims to identify why students struggle to visualise the outcomes of their work, and the extent to which the ability to visually recognise a design on-screen encourages sophisticated design developments. Group work is suggested as a possible way for students to support each other and overcome basic programming problems without the need for staff intervention.

Questions

- Is it appropriate for undergraduate students to engage with industrial technologies? Can this be of benefit to the overall learning experience. If so, what skills level is required to make this experience valid?
- How is it possible to reduce staff input into CAD/CAM teaching, so that students can quickly become independent learners?
- Is the ability to visualise design ideas integral to successful design innovations?

Key words

CAD/CAM, knitted fabric design, group learning, visualisation, visual representation, VARK.

Introduction

This paper examines a project currently running within the School of Design at The University of Leeds which aims to further investigate issues raised by a previous study to investigate the role of CAD/CAM technologies in enhancing the creative process of knitted fabric design (z, 2006). The initial study identified the reactions of a cohort of textile design students to the introduction of CAD/CAM technology within their knitted fabric design specialism. The project considered the ease with which students were able to adapt their design skills to working with this new system.

The investigation (Scott, 2006) confirmed that in order to realise sophisticated knitted fabric designs using the CAD/CAM system, a good technical understanding of knitted fabric structure was essential. The importance of accurate visual on-screen representation of design ideas was also highlighted in the study. Feedback from students indicated that some of them had struggled to recognise, and therefore understand, the impact of programming changes on fabric outcomes.

With the assistance of undergraduate knitted fabric

design specialists, the current project aims to identify why students struggle to visualise the outcomes of their work, and the extent to which the ability to visually recognise a design on-screen encourages sophisticated design developments. Research into student learning will consider whether particular learning styles (Honey and Mumford, 1995) are more capable of associating various fabric structures with the CAD system's on-screen representations.

Q: Do learning styles as identified by Honey and Mumford (1995) impact on the way students interact with new technologies (with particular reference to CAD/CAM systems)?

Context

Within the global knitwear industry, design and manufacture are divided both geographically and through the distribution of skills (Hunter, 2004). Recent studies (Stacey and Eckert, 1999; 2001,) identify a belief amongst some employers that a comprehensive understanding of CAD/CAM technologies is detrimental to the creative process undertaken by knitwear designers. Instead such employers prefer to separate design from realisation and employ skilled technicians to undertake programming responsibilities (Stacey and Eckert, 1999). Designers often remain isolated (both physically and through a lack of experience) from the equipment that they are designing for and technicians fill this skills gap. However, we feel it is crucial that knitwear designers understand the technology in order to produce commercial designs which exploit the unique properties of this production method.

Although commercial knitted fabric production is driven by technological innovation, within higher education, knitwear and knitted fabric design is often presented as a manual skill. The UK Universities Quality Assurance Agency (QAA) maintains that technology is an integral part of the design syllabus. However structured textile design education in the UK remains centred on the application of "hand-craft techniques" (Tellier-Loumagne, 2005, p.10).

Q: Is it appropriate for undergraduate students to engage with industrial technologies? Can this be of benefit to the overall learning experience? If so, what skills level is required to make this experience valid?

Equality

At The University of Leeds, knitted textile specialists are introduced to CAD/CAM technology within level two of their programme of study. One initial problem in introducing students to technology is that they have vastly different levels of CAD and CAD/CAM experience. These inequalities are identified by Schiller (1996) and Lax (2001) as a growing "digital divide", both cited in Digital Academe (2002). This project acknowledges the different levels of experience students may have with technologies and attempts to overcome this problem by assuming no background programming skills, and providing instruction from a very basic level. Textile Design students also complete several modules which focus on the use of specific CAD packages, including Photoshop and Illustrator and although the interface is very different, students will have some experience of using similar equipment such as the digitiser pad and pen.

Usability

The equipment currently used within School of Design is a Shima Seiki Super-Micro CAD system directly linked to a Shima Seiki SES122ff 10gg power knitting machine. Programming the power machine is realised over two stages: pattern creation and processing. During pattern creation the design is drawn on screen using different colours to represent different knitting actions. The Super-Micro system automatically converts pattern information into programming data during the processing stage. The programming data is transferred to the SES122ff machine before knitting.

The Super-Micro system is a difficult programme to use. It is not Windows compatible and commands are often difficult to predict. The system relies on using different coloured squares to represent different knitted stitches; for example col1 (red) = knit on front bed, col2 (green) = knit on back bed and col3 (yellow) = knit on both beds. Each square on screen can be differently coloured and represents one stitch.**SEE FIG. 1·2**

In Online Learning and Teaching with Technology, Murphy, Walker and Webb identify that the technology itself often dictates design ideas and even restricts a creative approach:

"One of the recurring problems that emerges in the educational use of technologies is that the technology is given pole position. The user is then placed in the position of adapting to the demands (or functionalities) of the technology." (Murphy, Walker and Webb, 2001)

FIG. 1: PROGRAMME ON SCREEN..

FIG. 2: KNITTED FABRIC PRODUCED.

In creating a project for use with the Super-Micro system it was important that students could understand the relationship between the pictorial graphs and the finished fabric and use the software to create fabrics relevant to their other design work. However, it is equally important that during the initial stages students are instructed in the use of the programme and develop an understanding of its capabilities.

The project

The study comprises two distinct sections. The initial project is a group technical notebook which is developed over the course of five weeks. Students will work in small groups to programme in a range of designs illustrating different technical aspects of the machines capabilities. The second part of the project is the development stage; using the technical knowledge gained in the first stage, each student will design a range of fabrics specific to their own design portfolio.

During the project, students will be required to predict outcomes from technical information and test structures that are both familiar to them and that are new to them. Through this process of experimentation I hope that their ability to unite their structural and technological understanding with design aesthetics

will improve, and that their approach to designing using CAD/CAM will become more sophisticated.

Students have agreed to analyse their learning styles with reference to the VARK studies. The learning styles will be analysed alongside design outcomes to see whether particular ways of learning impact on the ability to use the CAD/CAM system.

Teaching commitment

Feedback from previous student cohorts indicated that they enjoyed using the equipment and were pleased with the professional standard of fabrics produced. However, the success of previous projects has relied on intensive staff input into the work. Aldrich (1994) identifies the need for staff involvement in student use of CAD packages if the aim is for students to produce independent design work:

> *"It may be possible for large numbers of students to be introduced to basic or mechanical operations of CAD by means of good manuals, videos, on-screen training programmes, good pre-preparation through computer-interactive lectures and manual techniques. However if students are to develop towards self sufficiency through individual project work, this requires a*

high staff ratio, especially at the early stages." (Aldrich, 1994, p.151)

Q: How is it possible to reduce staff input into CAD/CAM teaching, so that students can quickly become independent learners?

The current project introduces the technology using a group project format. The intention is that through working together the groups will overcome basic problems without staff intervention and that through helping each other skills will develop more quickly.

Aims of study

Q: Is the ability to visualise design ideas integral to successful design innovations?

The aim of this project is to identify why students struggle to visualise the outcomes of their work, and the extent to which the ability to visually recognise a design on-screen encourages a more sophisticated approach to design developments. This project aims to make students aware of the potential of the technology available to them. By improving programming skills students will have the opportunity to explore fabric structures unachievable using other production methods.

Further areas for consideration

Q: How does the ability to visualise work impact on a students' understanding of theoretical problems of colour theory and proportion and technical considerations of yarn, structure and manufacturing?

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ONLINE STUDIO COURSES AT EMILY CARR INSTITUTE OF ART AND DESIGN

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Abstract

Can studio art be taught and learned online? This paper outlines the history of online studio art and design course development at Emily Carr Institute of Art and Design and focuses on courses taught to first-year level university students. Online courses are innovative and effective in supplanting if not replicating the face-to-face educational experience. When they succeed, as has been our experience, online courses require that students take an active role in their own educations. Students learn skills, knowledge, and values intended to expand concepts in art, design and media practices and develop work methodologies that extend from research, exploration and observation through to production and critical analysis.

Questions

- How does teaching online take place?
- What are the challenges to online studio learning?
- How can studio practices be effectively evaluated online?

Key words

Artwork, critique, curriculum studies, foundations, internet art, online learning, net art, studio art practice, pedagogy.

Introduction

This presentation outlines the history of online studio art and design course development at a Canadian post-secondary institution located in Vancouver, British Columbia: Emily Carr Institute of Art and Design (ECIAD). In addition to offering courses and programmes to students in our studio classrooms, ECIAD has a mandate to provide courses to remote students throughout the province, some as far away from the Vancouver campus as 1,200km. With a focus on courses taught to first year, introductory college or university-level students, this presentation will compare the outcomes of face-to-face studio-based courses with those of online courses and will discuss the implications, challenges, and rewards of online learning.

ECIAD's courses and programmes are delivered to students face-to-face, online, and in a blended environment. online courses are directed to students in remote locations, solely over the internet. Blended courses combine face-to-face delivery with supplemental online components such as projects, assignments, resources and online forums.

Initially our teaching colleagues questioned whether we could achieve equivalent learning outcomes with online instruction as in face-to-face courses since online delivery lacked the unique conditions of the studio classroom - in particular, the importance of learning from fellow students as much as faculty and the building of a learning community. We have found that students participating in online classes achieve excellent outcomes in the work produced and can and do build close relationships different from, but equally as creative and supportive as those formed by students working together in a classroom.

Online courses

Online courses are innovative and effective in supplanting if not replicating the classroom educational experience. We have found they engage students in taking an active role in their own educations, thereby establishing a learning community that exists outside of geographical and physical boundaries and constraints. Students cannot sit back but are totally engaged in the process of learning and this means not just completing and handing in assignments but learning through the analysis and discussion of works produced by others

as a significant part of their own development as art makers and thinkers. Online courses also provide many opportunities to share information and experiences that take place outside of 'class', either online or at actual venues. Students within online classes build up generous supportive relationships with each other despite never having met in person. We have learned that faculty are key to this, as online courses require a ramped-up level of dedication, curiosity, and follow-through to effectively conduct a class.

A history of online studio courses at Emily Carr Institute of Art and Design

In 1999, ECIAD provided research funds for faculty to develop two studio courses for online delivery over the Internet. Since then ECIAD has developed over 20 new and modified credit courses from existing academic, art, media, and design studio courses for online delivery.

The first studio course to be developed was *Telling Story*. It uses photography to explore how we tell stories in the age of information. The second course, *iprojects*, provided students with the theoretical and practical insight to produce their own internet specific art projects. These two third- year courses were initially designed and developed as stand-alone, html website courses - each course had its own distinct interface and design. They were first offered online to students in 2002, the same year that another third-year online studio course *Pipeliner* was developed which examined and taught students how to produce internet video art. These three courses had intrinsic roots in the web itself, unlike later courses where existing studio courses were adapted for online delivery.

These three studio courses were developed and presented at a time when the use of the Internet was rapidly changing and evolving. After a great deal of discussion with faculty around course delivery platforms and the desire for elevated visual aesthetics that could replace the bland, academic look and format of *WebCT*, *Whiteboard* and *Desire2Learn*, we decided to develop these first experiments in online learning as individual website courses in HTML (hypertext mark-up language - the syntax of websites on the internet).

In 2004, open-source content-delivery platforms started to become more robust and were able to

provide viable alternatives to increasingly costly proprietary applications. ECIAD made a decision to build all online courses using a free, open-source Course Management System (CMS) or Virtual Learning Environment (VLE) that was developed in Perth, Australia called *Moodle* (www.moodle.org). As a relatively small university, ECIAD (1,500 full-time students) with limited research and development funds, found the qualities of this application fitted the Institute's practical and aesthetic requirements. *Moodle* provides a stable, easy-to-learn course development and delivery platform from both the faculty and the students' perspective.

Around this time we realised that the target audience for third-year online courses was relatively small, so we shifted our focus to developing online versions of existing first-year studio courses using *Moodle*. Creative Processes became the first studio course ECIAD developed and taught in *Moodle*, followed shortly by *Visual Communication*. Since

They (on-line courses) engage students in taking an active role in their own educations

2005, ECIAD faculty members have transferred the content from *Telling Story* into *Moodle*, and *iprojects* and *Pipeliner* have now been collapsed into one new course *Online Portfolio*.

Online course outcomes closely follow general first-year Foundation-course learning outcomes, articulated for face-to-face contexts. These include the acquisition and development of skills, knowledge, and values intended to expand concepts and methodologies for art making through practice, research, exploration, observation and critical analysis. Course content addresses subjective, conceptual and intuitive modes associated with the creative process and ideation (*Creative Processes*) as well as formal articulation (*Visual Communication*). Much of this is applicable to all visual art, design and media disciplines. Students are also introduced to collaborative and interdisciplinary approaches to art and design.

(On-line) course content addresses subjective, conceptual and intuitive modes associated with the creative process

Case study: Creative Processes (FNDT 108)

Creative Processes is one of three core, required courses taught in the first semester of first year at ECIAD. This course explores creative processes, the realms of imagination, and art and design practices grounded within a social, cultural and personal context. Various media and methods of practice are introduced. Group projects, individual assignments, critiques, discussions, research and studio sessions provide students with opportunities to work through issues and ideas involved in making art and include readings and viewing art.

Professor Renée Van Halm researched and developed an online version of FNDT 108: Creative Processes and has been successfully teaching the course since 2005. The acquisition and development of technical skills are not always prerequisites to how we teach at ECIAD and this particular Foundations course was considered to be a good fit for online delivery. The primary concern was to present the course content so that it would be easily understood and directly applicable to assigned student projects without the physical presence of the instructor.

Aligning Foundation-course outcomes with online delivery

First-year, classroom Foundation studio courses combine the presentation of ideas and concepts with in-class exercises, discussions and critiques of assignments completed outside of class primarily through hands-on material production. In these discussion/critique-based classes, the instructor challenges preconceptions and develops skills in research, production and critical analysis within a nurturing environment that recognises the individual needs of students. During the developmental stage, we asked ourselves if the presentation of topics online would negate the importance to first-year students of the classroom situation.

We were confident however that if we referred to the learning outcomes recently developed for all Foundation courses that the same competencies and outcomes could be attainable in an online environment and this is what we concentrated on, not the method of delivery. After we reviewed course outlines by face-to-face instructors, we concluded that it is entirely possible to imagine ways to achieve the same results in a virtual space.

Online course learning experiences

What was a student expected to learn or experience in the face-to-face studio course that we were modelling in the online environment? For our purposes this was broken into technical, material, formal and cognitive skills and abilities for which we would find equivalences in the online environment.

Technical skills taught are digital tools: recording, scanning, sound/video, page set up and working with websites. Students produce art projects in a studio but they also learn digital file management in the process of exploring, recording and presenting their projects/assignments. This includes collecting images, completing exercises and writing analytical and critical responses. Both independent and group research and production is conducted through a range of approaches. These include working with ideas through many processes, both analogue and digital; employing a number of formal and technical strategies; applying time-based and/or static techniques, engaging in idea development and presenting work. Last but not least, students develop communication skills in reading, listening, language/written expression.

The acquisition of these skill sets is coupled with the development of cognitive skills by looking

at relevant art and design practices. Students are encouraged to generate ideas by looking at many different methodologies and approaches to visual production. This includes exercises in risk-taking and research where ideas and concepts are examined and analysed within a social-cultural context. Various models of online critique are developed, including those that surround issues of intercultural sensitivity and visual literacy. Students learn to value process and develop awareness of sensory and visual stimuli through internal and external observation. All these methods are closely aligned with Foundation learning outcomes.

Online course structure

In designing this course and others we attempted wherever possible to base online delivery on studio classroom models. However the nature of the online environment does require greater formalisation of course content and delivery - ie all content must be carefully articulated, generally in writing. As well, a greater number of formalised student activities are required to generate an active class environment and to enable effective evaluation of student performance. Like face-to-face courses, a regular course schedule and a week-by-week syllabus are followed, weekly exercises/assignments are set as well as visits to websites including online exhibitions, web links and references related to that work. It may also include other material unrelated to art, such as a compelling current or historical event. Each week all students are assigned short visual exercises and/or more in-depth research projects. These activities can be done at any time during the week at the discretion of the student but are generally due on a specific date.

An example of an activity is a project on the topic of walking: here the student is asked to go for a walk with a digital camera in hand to investigate their immediate environment as a way of valuing local experiences. This project in its most recent iteration had an interesting and unexpected result when one student who lives in the far north was unable to walk due to the extremely cold weather and instead fulfilled the assignment from the confines of her car. This generated discussions of cultural and geographical specificity. Unlike face-to-face classes we have found it beneficial to break the online class into groups of four or five. This provides more productive social learning contexts wherein course activities can be

assigned, submitted and reviewed on a staggered schedule. Each group has different assignments with different due dates. This results in a dynamic class environment where every week students post assignments electronically in online forums. The critique either individual or group, the traditional site of learning for most arts practices, is replaced in online course by the peer review. Students are required to post formal peer reviews in response to each other's assignments. In addition the instructor writes personal comments to the student privately. Informal commentary and discussion by students and the instructor regularly occur in discussion and critique forums as well.

To supplement the asynchronous activities we have just looked at, synchronous weekly chat times are scheduled. Chats are used for question and answer sessions, discussion of the week's topic and may also include brainstorming exercises and provide a valuable opportunity for informal socialising amongst course participants.

Challenges to be resolved

Despite great advances in technologies we have yet to find the time or resources to support media-rich web interfaces such as video conferencing, high-resolution video streaming or pod casting. This is due not only to the lack of availability of expertise or resources at our end but also of the unreliability of the equipment and Internet service providers available to students. Pedagogical concerns continue as students are increasingly less text based in their learning styles, a disadvantage in this context where students are called upon to read extensively just to access course material. Furthermore, attrition on regular 15-week courses is greater than in face-to-face courses, forcing us to consider the possibility of making shorter components available. That said we continue to be encouraged by the enthusiasm of both the instructors and students who see the positive results of online courses and the learning it fosters.

THE ART OF LEARNING ONLINE

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Abstract

This trigger paper will seek to address how advances in the design and ubiquity of learning technologies impact on the experience of art and design study. In particular it will investigate how e-learning can be used in facilitating academic discussion within and across disciplines. It will draw upon two related initiatives. The first is a pilot project based at the Royal College of Art, London (RCA) that is exploring how collaborative virtual learning can supplement face-to-face teaching within a Masters level programme. The second is a research project that investigated what factors promote engagement with online education in art and design.

Questions

- What incentives and disincentives are there for students and institutions to use e-learning in art and design?
- How can e-learning be used to facilitate academic discussion within art and design?
- What are the key considerations for a course designer in integrating elements of e-learning within their academic programme?

Key words

Critique, discussion, e-learning, interdisciplinarity, online

Introduction

The use of e-learning is a particularly sensitive issue at the RCA because of the importance attached to the face-to-face experience, either through individual tutorials or the group critique. The RCA is a wholly postgraduate university and has at present approximately 700 Masters students, the majority of whom study full time for the two-year span of the course, and around 100 research students enrolled on MPhil or PhD programmes. In 2004 the College adopted and adapted an open source Virtual Learning Environment (VLE) called Moodle, which has been used chiefly as a means to widen access to resources and facilitate more efficient cross-college communication. With students usually present on site throughout their period of study the *any time, anywhere* incentive that Moodle offers has not to date been a significant driver to experimentation.

While individual departments have only just begun to exploit Moodle as more than an administrative tool, there has been greater interest in the opportunities that it provides for cross-College learning. For example the existing RCA Prospectus states that:
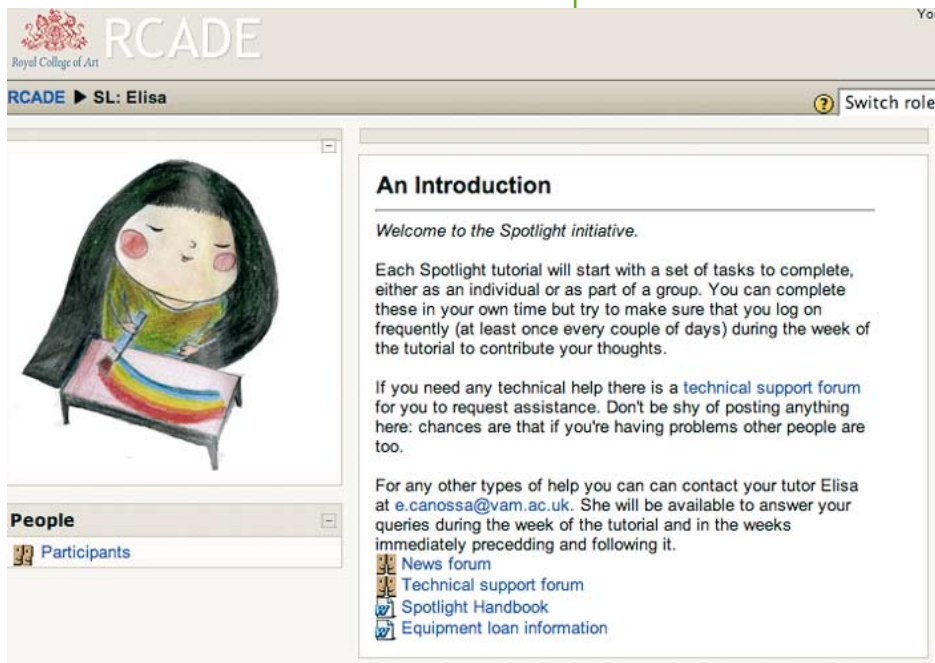
> *"Many students feel a strong sense of attachment to their own Department and concentrate their studies and practice within their own discipline. However, staff and students increasingly recognise the energy and creativity that can be generated by working across the discipline boundaries."* (RCA, 2005)

With 19 academic departments, each with its own distinctive vision and voice, it has often been difficult to find dedicated space within the curricula to enable students to work together. This is evidenced by a number of comments in the most recent College student survey:

> *"It's such a shame that group critiques are not open to those outside a tutor's group. There are not enough opportunities to show work with college and gain group feedback."* (2004/05 RCA Student Survey)

> *"No time to reflect on our work, to 'think', to understand our design and that of others in college."* (2004/05 RCA Student Survey)
> *"The workload has been too intense, leaving no time for participating in general college activities outside department."* (2004/05 RCA Student Survey)

FIG. 1: SCREENSHOT OF SPOTLIGHT TUTORIAL

Although there are a number of College-wide forums that students can attend, such as "lectures, seminars and discussions, drawing and language classes, short courses, software training, exhibitions, open crits, social events and so on" (RCA, 2005) student collaborations are generally thought to happen 'organically' (ie through students' own initiative). Even when students do venture into other departments they can be disappointed when first priority on equipment and tutor time is given to 'home' students. This can be particularly frustrating for students whose work straddles subject boundaries. The problem is compounded by the split-site nature of the College, with the majority of departments based in South Kensington and some Fine Art degrees partly or wholly based in Battersea.

To address this the RCA sought funding to pilot an interdisciplinary initiative that employed Moodle to foster opportunities for students to engage with peers across disciplines. The College is one of the institutional partners in the Centre for Excellence in Teaching and Learning through Design (CETLD), which is part of a network of 74 centres set up by the government to "recognise and reward excellent teachers and enable institutions to invest in staff, buildings and equipment to support and enhance

successful learning in new and challenging ways" (HEFCE, 2005). In tandem with another of the partners, the Victoria and Albert Museum (V&A), the College was able to secure support through the CETLD project fund to develop and run the pilot during the 2006/07 academic year.

Spotlight

The Spotlight project sought to address the issue of interdisciplinarity by recruiting a cohort of 24 students from 10 different departments to take part in a series of online tutorials interspersed throughout the academic year. These were conducted through Moodle, which has been rebranded within the College as RCADE (Royal College of Art Digital Environment). SEE FIG. 1.

The students were divided into three tutorial groups. Each asynchronous tutorial was student-led, conducted entirely online and spanned from a Wednesday to the following Wednesday. The tutors' role was facilitative, to guide and moderate, rather than dictate discussion. There were two different types of tutorial. *Themed tutorials* explored a particular theme that had relevance to the range of disciplines represented at the RCA. Each started with a set of tasks to complete, either as an individual or as part of a group. *Works in progress tutorials*

involved each student digitally presenting their work to peers through RCADE, which was used as the basis for a collaborative group critique. The presentations could be in the form of an image, audio or video files prepared in advance. Participating students were given access to a store of high-quality digital recording equipment in order to do this.

Findings

The findings draw on an interim evaluation of the Spotlight initiative and complementary research carried out by the author. This additional research involved two sets of subjects: students studying at the Centre of Fine Arts (COFA Online) at the University of New South Wales, Australia and students enrolled on H804 Implementing Online, Open and Distance Learning, a postgraduate course run by the Open University (OU). The research encompassed two strands, the first, a quantitative analysis of the frequency, length and pattern of contributions to asynchronous online discussions. The second, a short qualitative survey of students' attitudes towards and experience of online education.

The Spotlight initiative was successful in introducing students to peers from different disciplines and in generating a high quality dialogue between them. Students reported that:

"The interdisciplinary nature of the group makes it possible to have a more realistic approach to understanding how other students are working, creating and communicating ideas. The feedback received seemed honest, frank and direct." (Spotlight Student Feedback)

"Spotlight has made me more critical of my work and made me question my place and role in my chosen practice." (Spotlight Student Feedback)

There was significant variation in the level of engagement with students across the three tutorial groups. Students from less active groups reported that they were deterred from contributing by the lack of impetus in discussions:

"The motivation of everyone seems pretty low, so it kind of ruins the whole idea of it. If you put a posting in and no one responds for days, it loses momentum." (Spotlight Student Feedback)

"I find using RCADE acts as a barrier. I find it

restricts what I want to say as once I have posted the comment it is on display…it makes you feel self conscious about your opinion in a way a vocal tutorial would not. I find the discussion stunted and on several occasions my comments and even my work-in-progress have been ignored by the entire group, this would not happen in a physical tutorial." (Spotlight Student Feedback)

Conversely students seemed willing to engage in collaboration if they felt that the group, or individuals within it, shared similar aspirations and reciprocated their effort:

"The most encouraging factor… is if everyone in the group responds to each other in a constructive way." (COFA Online student)

"I'm often helped by others so hope to be able to do something for others in turn." (H804 student)

In the research the COFA Online and OU students were asked what factors encourage them to contribute towards group work. The data suggests that students were most strongly motivated to contribute because of external drivers. For example, 46% of H804 respondents strongly agreed with the statement "I contribute towards group work because I am assessed on it" (an additional 41% agreed with the statement). The response from COFA Online students was even more marked, with 50% strongly agreeing to the statement. All the H804 respondents, and 96% of COFA Online students either strongly agreed or agreed that they contribute because it is an expectation of the course. In the case of Spotlight the initiative was designed to run alongside Departmental practices and no marks were attached to participation. This could help explain why in some groups the frequency of feedback was poor.

One of the strongest factors in both the Spotlight evaluation and the research was the pressure of other commitments. Spotlight students commented that:

"Sometimes it's easy to drift away from Spotlight when the work at the department seems to build up." (Spotlight Student Feedback)

Similarly students in the research reported that a lack of time was considered to be the greatest barrier to contribution, with 64% of H804 students and 46% of COFA Online students either agreeing or strongly

agreeing that it prevented them from participating.

Both an analysis of the number of postings and feedback received through the evaluation indicate that Spotlight students were more enthused by the *works in progress* tutorials than the *themed tutorials*. Further investigation is needed to establish whether this reflects the character of Masters students at the RCA, the design of the themed tutorials, or some other factor or combination of factors.

Recommendations

The combined results of the Spotlight evaluation and the additional research tend to indicate that there are a number of key factors to consider when designing e-learning elements within an art and design environment, perhaps the most important of which are:

Expectations

Students report that they are strongly motivated to engage because of the expectations of the course. These expectations should include:

• Anticipated time commitment
• Frequency and nature of contributions
• Description of group roles
• Timetable of deadlines.

A clear set of expectations allows student to appropriately plan their time so that they fulfil the objectives of the course without feeling anxious that because the course is always available they should be too. Ideally the e-learning elements of the course should also be integrated with the other aspects, so that participation is reflected in assessment and feedback practices.

Scalability

It has been argued that one of the benefits of e-learning is in its scalability: a single tutor can potentially interact with many more students online than possible within a face-to-face environment. This research suggests that this is not the case for two distinct reasons. The first is that the amount of time required for the tutor to guide and moderate discussion online is at least equivalent to the time required for face-to-face tutorials. Secondly, and perhaps more importantly, the larger the group size the greater the temptation for each student to *free-ride*, to lurk rather than to actively participate in discussions. The smaller the group the less easy it is

to hide away and therefore the greater the chances of creating a virtuous loop of call and response.

Time

If students are to be expected to contribute fully and fairly to online discussion they need to be given the time and space in which to do so. If, as in the case of the Spotlight initiative, students are participating *in addition to*, rather than in substitute of, normal academic practice the optional component is the most likely to be sacrificed when pressure is high.

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CREATING 3D VIRTUAL SPACES IN ART & DESIGN EDUCATION

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Abstract

In this paper, the first stages of the research project exploring how new 3D virtual programming are used in learning. The programmes are described and the development of an online 3D virtual interactive learning and teaching environment for the School of Art & Design is presented using a range of screen shots of different locations and user functionality from within the 3D environment.

Introduction

Online interactive 3D virtual environments are being increasingly populated, and integrated into many different areas of our real-world global cultures. This paper outlines a research project that explores the explosion in popularity of 3D massively multiplayer online games (3D MMOGs) and discusses the development of 3D multi-user virtual environments (MUVEs) for learning, teaching, experimentation and communication in art and design education.

We are experimenting with 3D virtual programming software and 3D modelling and animation software to build a shared 3D virtual environment in which to discover new methods for learning, and to encourage and evolve innovative ideas about art and design communication in educational 3D virtual spaces.

Exploring virtual experiences as a virtual three-dimensional character(s) or avatar(s) and sharing 3D ideas in a 3D virtual environment will undoubtedly stimulate discussion on learning theories. What previously impossible pedagogies could evolve from collective immersion in a 3D virtual space where anything is possible? How can the integration of these virtual worlds extend the traditional and physical learning and teaching experience within art and design education? How will the interactive availability of 3D virtual learning material change the future of our learning and teaching experiences?

Virtual worlds and massively multiplayer online gaming

Art and design education operates within a unique and constantly evolving space; it is orientated around collaborative project-based learning and teaching. Within art and design studio environments the experimentation with different media, is explored through 2D and 3D physical and digital experiences, using a combination of experimental images, narrative, animation and movement to facilitate multi-layered communication between both students and tutors individually and in groups.

A recent explosion of interest and immersion in recreational and educational gaming has led to increased research into 3D gaming technology and engagement/learning theory, focusing on the effect of using games in practice, for training and to develop the structure of co-operation in game play situations (Hoare, 2005, Elliot et al, 2002). The serious implications of gaming for education are still relatively new, but the application potential of the medium is rapidly unfolding (Octar, 2006). In 2004, the legal regulation of virtual identity and property in virtual worlds was explored in depth by Balkin in an article in the Virginia Law Review (Balkin, 2004). Balkin predicted that we are now, not far away from really seeing what the habitation of virtual worlds can really teach us.

"As multiplayer game platforms become increasingly powerful and lifelike, they will inevitably be used for more than storytelling and entertainment. In the future, virtual worlds platforms will be adopted for commerce, for education, for professional, military, and vocational training, for medical consultation

and psychotherapy, and even for social and economic experimentation to test how social norms develop. Although most virtual worlds today are currently an outgrowth of the gaming industry, they will become much more than that in time." (Balkin, 2004)

3D multiplayer online games such as *Second Life* (http://secondlife.com/whatis), *there* (http://www.there.com) and *A tale in the desert* (http://atitd.com), provide a more social, creative and networking experience than the popular but violent, shooter or swordplay multiplayer gaming. In the virtual space of 3D massively multiplayer games, several, hundreds or even thousands of people who take on virtual characters known as avatars, can be playing and networking at the same time via broadband. Many of the virtual people in *Second Life* talk to each other 24/7, about anything and everything. Rushe (2006) sensationally claims that in *Second Life*,

> *"Over a million people build homes, make love and live new lives here. But even though this world exists only in their imaginations, some people are making six-figure salaries, and corporations are moving in."* (Rushe, 2006, p 16)

3D multiplayer online gaming significantly changes the nature of the computer game as we previously knew it; you, the user are no longer playing against the game, through preset levels, constrained and only evolving as the game developer has determined. The actions of other people and their ideas make the game unpredictable, open ended and spontaneous – very much like real life.

3D interactive online art and design research project

The online 3D virtual interactive environment has been developed by 3D and Fashion design business research academics in the School of Art, Design & Architecture, at the University of Huddersfield. The project is focused on learning integration and transformation within higher education. Students and staff can interact and experience University life as part of an on-line virtual educational community, as virtual 3D characters also known as avatars. The 3D interactive environment enables users to experiment within virtual studio spaces independently or collectively. The environment creates opportunities

for interactive 3D online teaching support materials, links to 'live' lectures and provides real-time distance communication learning experiences for students on international/franchise courses.

Through the strategic use of virtual programming software and 3D modelling and animation software research & development of the virtual environment, we have investigated and applied methods of learning and thinking by looking at games as the intersection of play, pedagogy, and technology. Academic and student user experiences have been tested and recorded using separate HE art & design faculty workshops. In the workshops single users explored the 3D virtual environment. The first stage of development has included: modelling of basic characters, programming movement, testing communication tools using sound and animation/video, and adding student work to create gallery/studio spaces.

Methodology

The methods for building and developing virtual spaces within the 3D environment for character styling and functionality of objects are as follows:
- Research and design
- Concept layout: ideas development, illustration and story boards
- 3D modelling of environment
- 3D object modelling for simulation
- Character design and clothing
- Lighting design
- Preparation of texture and surfaces
- Sound and video capture and editing
- Programming
- Testing and evaluation with academic/student users in education.

3D Virtual School of Art & Design

This section shows views of the first-stage development of the virtual environment. The first-stage work was carried out to test programming, modelling and character navigation in the space. The 3D virtual School of Art, Design & Architecture environment includes three subject area spaces: a product/transport studio space, design business space and architecture space and a large open space with projection screen for visuals and sounds.
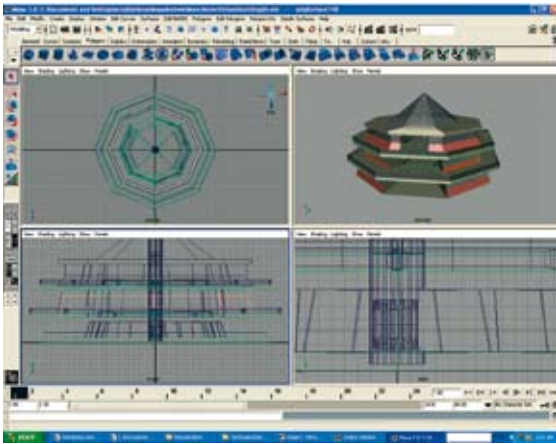
FIG.1
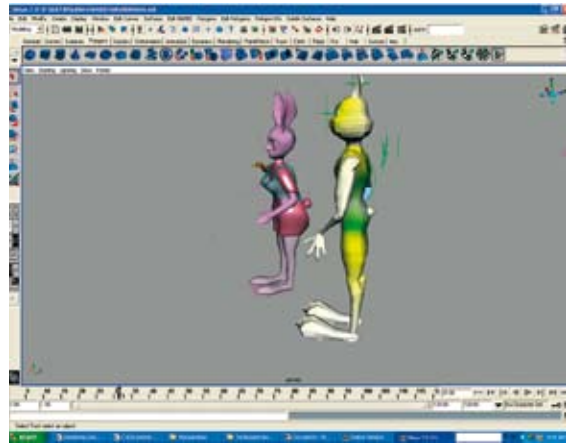
FIG. 2
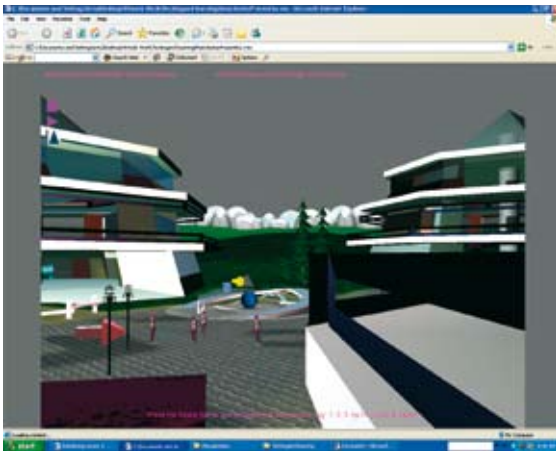
FIG. 3
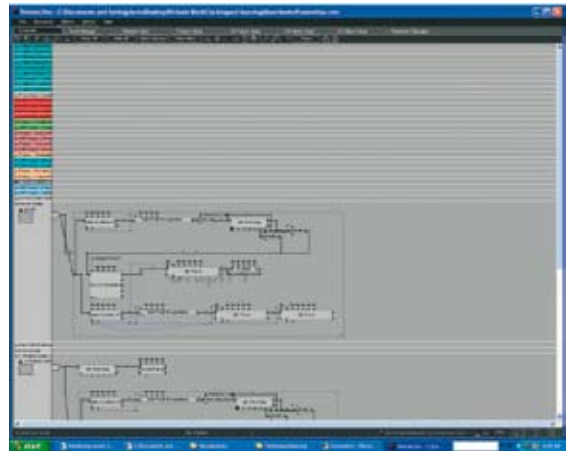
FIG. 4
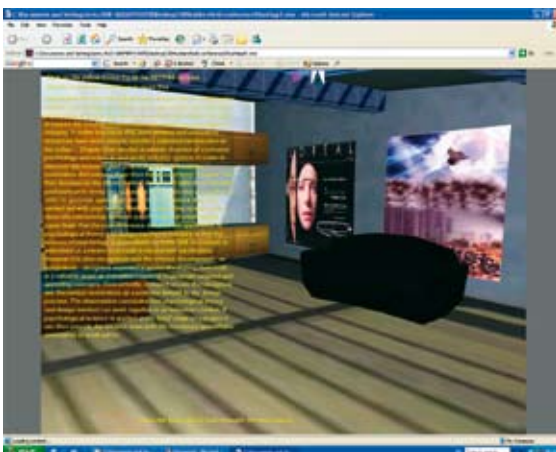
FIG. 5
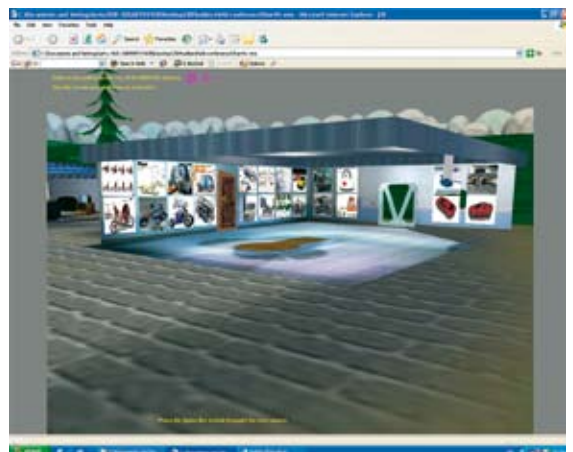
FIG. 6
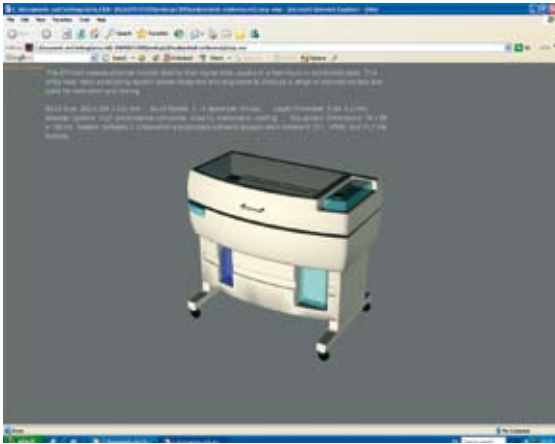
FIG. 7
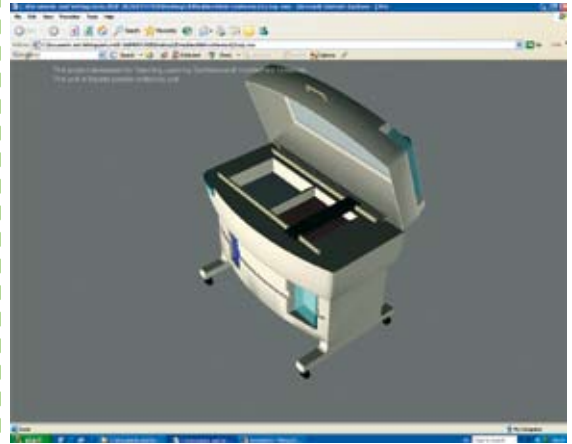
FIG. 8
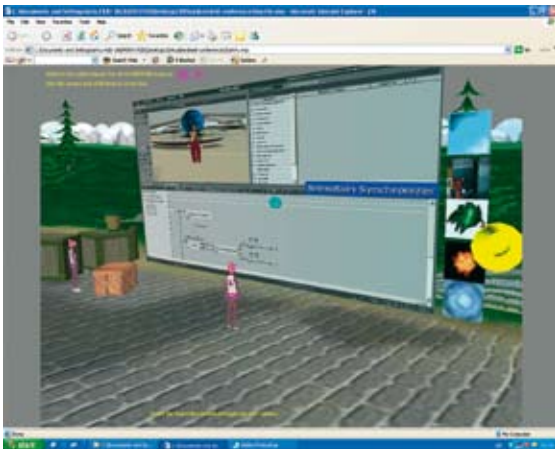
FIG. 9

FIG. 10

3D modelling and programming interactivity

Figures 1 and 2 show the new buildings, recently developed as part of the next stage of the project for testing built spaces modelled in Maya software. In Maya, materials and textures are applied then transferred to Virtools for lighting, shaders, texture settings/materials and images adding as shown in Figure 3.

Figure 4 shows Virtools software programming script. All actions in the environment code must be added correctly and tested. The user clicks on the space bar and they can change the camera to different views. Figure 5 shows the Design Business subject area meeting room; this is a combined social/business/ seminar space which has examples of student work displayed on the walls. This room could also be the

location of an interactive library of blogs, previous year's projects, reports, journals and dissertations. Documents can be input via scanned text and bookshelves contain links to dissertation abstracts that can be linked to a PDF document in Blackboard or on a server. A thumbnail image can be added so the student can review quickly and then be opened from a link in a 2D virtual learning environment (VLE) such as Blackboard, WebCT or Moodle. Presentations, videos and animations can also be viewed from a wall screen or virtual 3D TV and viewed collectively in the virtual design business meeting room.

Figure 6, is the virtual product & transport design courses exhibition studio. Users can move the camera mode using assigned keyboard commands to walk into the room and look around and move closer to the student work.

Interactive Rapid Prototyping (RP) machine student learning simulation

Figures 7 and 8 shows the 3D manufacture room. This room contains a 3D rapid prototyping interactive user teaching and learning simulation. Instructions for use are scrolled onto the screen in text format.

RP or Stereo Lithography is a process that prints many layers of powder or resin to build a complete physical model from a 3D CAD model. The objective for developing the 3D simulation is that students can pre-learn to use the actual machine in the virtual workshop, they can see how it works, learn the limitations, advantages and simulate a model-making process in advance of the lecture or if they missed the introductory lecture or had difficulties with learning they can revisit and use in their own time. Users can zoom in, zoom out and rotate the RP machine using keyboard keys. The RP shows the virtual production of a 3D model layer by layer as an exact of the real RP machine.

Figures 9 and 10 show the character mode. In the role of the avatar, the user can use arrow keys to turn towards the screen, walk or run in a different direction. Avatars can activate and listen to recordings of sound and video. Large screens are placed in the outside area where anyone's presentations could be uploaded and viewed, students can upload their work and ask each other questions or test exhibit their work for use of space and audience interaction. The buttons on the right of the screen activate different animations or movies. Also, we have added a 3D speaker so when the movie is watched it projects with surround 3D sound. The speakers can also be rotated to direct the sound towards or follow the avatar's position as users move around the VE.

Conclusions and future work

Based on the initial research and developmental work in the virtual environment, we believe that this project has the potential to extend far beyond the 'traditional' glass, bricks and mortar learning and teaching experience for everyone – students and staff at all levels within the University of Huddersfield. We also speculate that during the next stage in multi user testing, students and staff will quickly create new and innovative methods through exploring, interpreting, analysing, discovering, evaluating, and problem solving in a space where being anything, anywhere and anyone at anytime is a possibility.

At this early stage in the research, we have established that the potential of virtual space need not be limited by the developers or academics. Virtual spaces can encourage all learners to independently, create, or experience opportunities that are not possible in physical world. In further development of the environment, users/learners will be able to create their own space using a range of programmed objects and basic primitives that can be altered or properties changed. The use of environmental sounds, real voice for chatting, number of people in a room or global interaction, server bandwidth speed, interaction between objects and characters using physics to simulate real world conditions, use of image quality and quality of polygons for realism of 3D models and character details, and programming of educational specific content can be developed and tested through creative play, shared experimentation, and most importantly, interdisciplinary collaboration.

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STRAND B2: INTRODUCTION: INCLUSIVITY

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Behind current government policy is a belief that holds widening participation to be fundamental in promoting social inclusion and improving economic competitiveness. This drive is channelled through the Higher Education Funding Council for England (HEFCE), which supports funded growth in student numbers to meet the challenge of widening access, increasing participation and student progression.

Widening participation, in the research commissioned by the Council for Higher Education in Art and Design and Arts Council England (CHEAD/ACE), is defined as ensuring that all individuals have equal opportunities to participate in education and to achieve, regardless of particular circumstances such as socio-economic status, age, ethnicity, gender, sexuality or disability (Hudson, 2006).

This concept in higher education is by no means new, and can be traced back at least to the mid-19th century. But new legislation such as the Disability Discrimination Act (DDA, 1995), the Special Educational Needs and Disability Act (SENDA, 2001) and the 2000 amendments to the Race Relations Act create, in principle, powerful drivers to widen HE participation. SENDA, for example, requires Higher Education Institutions (HEIs) "not to treat disabled students less favourably, without justification, than students who are not disabled; and to make reasonable adjustments to ensure that people who are disabled are not put at a substantial disadvantage to people who are not disabled, in accessing higher education services". At the same time the Government is requiring the sector to increase the proportion of students from under-represented groups. On a detailed level, the Council of Europe has issued a directive that all courses on the built environment should incorporate inclusive design.

Given the policy focus on widening participation in higher education, it is unsurprising that there is a

range of recent and current research across the sector as a whole. Powney (2002) identified good practice in relation to widening participation in higher education. Good practice included: raising staff awareness of widening participation strategies; commissioning research and using research findings to plan widening participation activity; using student feedback to develop approaches to widening participation; altering recruitment, assessment and curriculum processes; and ensuring that professional development was mandatory.

Within creative and performing arts, design and media higher education there is a whole range of widening participation activity for potential and current students. This includes, for example, summer schools and taster days for school and further education students; support with portfolio and interview preparation for applicants; and on-course support ranging from counselling services to study skills and specific support for dyslexic students and students with disabilities.

However, on the whole there is a lack of specific research and development activity on widening participation in creative and performing arts, design and media higher education, although some developmental projects have included a research focus. In part this may be due to a widespread view that the portfolio or artefact as the end product of the art course is also seen as the consequence of the perceived meritocracy of creativity, and therefore disassociated from, or created in spite of, the individual student background or current circumstances.

In general, because evidence has not tended to be systematically collected, analysed and reported, it is difficult to determine ways in which research into widening participation in discrete disciplines might be reproduced across the art and design field.

For example, despite growing interest there remains a lack of research on literacy demands such as reading, writing, and speaking and listening for students of creative and performing arts, design and media. This includes the ways in which students whose backgrounds represent a range of widening participation issues manage the range of literacy demands, and how can staff reconcile these demands within and across the student experience as a whole.

Much of the recent and current research into widening participation across the higher education sector as a whole has been small in scale. However, such studies can explore an issue in depth and often provide valuable insights; indeed, the CHEAD/ACE research (Hudson, 2006/7) underlines that there is a wide range of often very creative activity in relation to widening participation in creative and performing arts, design and media higher education.

The four papers in this section demonstrate this creativity and present research topics specific to art and design, rather than taking a general approach to widening participation. This focus should assist art and design staff, who are often tempted to see wider participation as an institutional problem rather than something that needs to be addressed within their traditionally democratic and creative sector.

For example, Rankin and Riley consider whether dyslexic students have particular difficulty in creative artwork, and whether this should be taken into account during assessment.

More generally, Hamilton, Morris and Childs describe the InQbate project, which creates alternative and flexible learning spaces that can be adapted to the needs of a wider variety of art and design students. And Canniffe describes a US project in Baltimore that aims to involve students in community projects through graphic design, and foster a closer relationship between the academic world and the deprived communities that surround it.

Perhaps the most challenging paper provokes the sector to reconsider the way it thinks about disability and the built environment. Dr Jos Boys examines the assumption that access for people with disabilities, for example, should not be considered as an additional feature of a building design that otherwise would not acknowledge their existence at all.

All four pieces of research isolate particular factors, specific to creative and performing arts, design and media higher education, that might contribute to inclusive participation. In a previously little-examined field, all these contributions are important and relevant in changing attitudes within the sector as a whole.

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(There is a) widespread view that the portfolio…(is) disassociated from, or created in spite of, the individual student background or current circumstances

EXPLORING THE LINKS BETWEEN DRAWING AND DYSLEXIA

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Abstract

We are interested in and concerned by how functionality is affected in dyslexic art students beyond the well-understood difficulties with text. What has been of particular interest to us is that some of our dyslexic students complain that drawing is particularly difficult for them. Some of these students exhibit the same kind of evasive strategies and anxieties about drawing as are normally expected of dyslexics in relation to text. This has prompted us to ask this question: is there a previously unrecognised and unexplored link between dyslexia, visual and spatial sensibility in general and the ability to draw?

Questions

* Is there a previously unrecognised and unexplored link between dyslexia, visual and spatial sensibility in general and the ability to draw?
* Is it possible to develop teaching strategies to improve these students' performance?
* How might one measure the success of such intervention?

Key words

directional confusion , drawing, dyslexia , lack of automaticity, mental rotation, visual stress

Introduction

It is now well established that there are many more incidences of individuals with dyslexia within the art and design community than in other fields. At the Royal College of Art, where we are able to recruit extraordinarily talented young artists and designers for postgraduate study, between 25 and 30% of our students have been identified as dyslexic. Likewise in the Faculty of Art and Design at Swansea Institute, student cohorts with up to 33% of dyslexics have been identified. Interestingly Central School of Speech

and Drama recently reported 23% and RADA 13%, This compares with between six and 10% in the general population.

While dyslexia certainly can affect the reading and writing skills of students to varying degrees, it can also have a major impact on organisational skills, presentation skills and oral skills (for example through slow or inaccurate word recall in a tutorial). Where many dyslexic students develop strategies to overcome difficulties with the mechanics of reading and writing, they experience serious problems with structuring information and arguments, for example in extended writing. Another aspect of this can be the difficulty to absorb and retain a structured argument or, for example, a series of instructions. We continue to be interested in and concerned by how functionality is affected in dyslexic art students beyond the well-understood difficulties with text, for example in short-term memory or the ability to organise data

What has been of particular interest to us, is that some of our dyslexic students complain that the representation of three-dimensional objects or scenes or ideas in two dimensions using line, light and shade is particularly difficult for them. Some of these students exhibit the same kinds of evasive strategies and anxieties about drawing as are normally expected of dyslexics in relation to text. This has prompted us to ask this question: is there a previously unrecognised and unexplored link between dyslexia, visual and spatial sensibility in general and the ability to draw?

There is a range of philosophical bases from which methods of assessing drawing can be derived: the rationalist and empiricist bases share an ontological attitude that reality is an absolute concept, rationalists aim for analytical objectivity, empiricists for the observational objectivity advocated by John Ruskin. From a pragmaticist base, reality is construed as

Cognitive Processes	Indicators	References
Mental rotation	Odd perspective	Finke, R. (1990) Oatley, K. (1978)
Remembering (visual memory)	Forgetting the image Forgetting drawing conventions	Hooper, K. (1976)
Hand-eye co-ordination (visual motor integration)	'Hedge-your-bets' lines	Oatley, K. (1978)
Visual perceptual skills	Fear of failure Lack of confidence Literal child-like drawings Drawing what you know, not what you see	McKim, R. (1972) Downs, R. and Stea, D (1974)
Visual stress (problems with stability)	Inability to draw your mind's eye image	Samuels, M. and N. (1975)
Lack of automaticity	Rigid, static drawings	Nicolson, R. and Fawcett, A. (1990)

an individual experience, to be explored through drawn emotional responses. Constructivists argue that all notions of realities are socially constructed, and accept a wide range of cross-cultural responses constructed through a wide variety of geometries.

It is therefore imperative that, in order to establish agreement about the accuracy or not of drawings we need to identify a system for appraising the drawings. We looked at existing well-documented dyslexic difficulties which we felt could be translatable and identifiable through drawings these included: visual perceptual difficulties (McKim, 1972, Downs and Stea, 1974); visual motor integration difficulties (Oatley, 1978); problems with stability (Samuels and Samuels, 1975); difficulty with mental rotation (Finke, 1990, Shepard and Metzler, 1971); short-term memory difficulties (Kristina Hooper, 1976); and lack of automaticity (Nicolson and Fawcett, 1990). We then drew up the taxonomy in the table above. **SEE TABLE 1.**

Drawing it could be argued is central to most creative activities, at least in the visual studies field. Within the disciplines of art, design and architecture

it is used as a tool for developing ideas, as a way of planning a project, as a method for recording visual information to add to the students' vocabulary of visual imagery. I would guess it could have similar applications within the disciplines of drama and dance for notational purposes. One could speculate how it could also have uses within music. The point is, that drawing is a process that is central albeit in different form to all these disciplines and so a greater understanding of how these specific difficulties could compromise students' creative outcomes is helpful to those engaged in teaching them.

Both at the RCA and at Swansea, student groups comprising 10 statemented dyslexics and 10 non-dyslexics were invited to make drawings in response to instructions given in both written and spoken modes, thus generating a total of 40 drawings from each institution. Students gave permission for their drawings to be used in academic publication, and were paid £10 each from funding provided by the RCA. The RCA drawings were analysed by Howard Riley at Swansea, and the Swansea drawings were analysed by Qona Rankin at the RCA. Neither was given any other information, and both analysed the drawings using the taxonomy of visual indicators of dyslexia listed above.

Dyslexia… can also have a major impact on organisational skills, presentation skills and oral skills
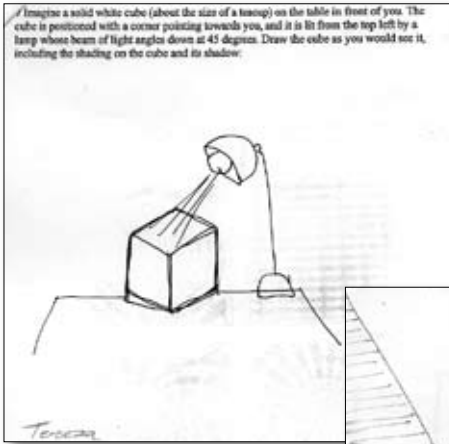
FIG. 1
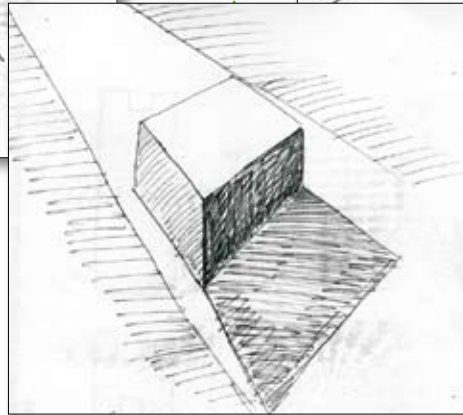
FIG. 2
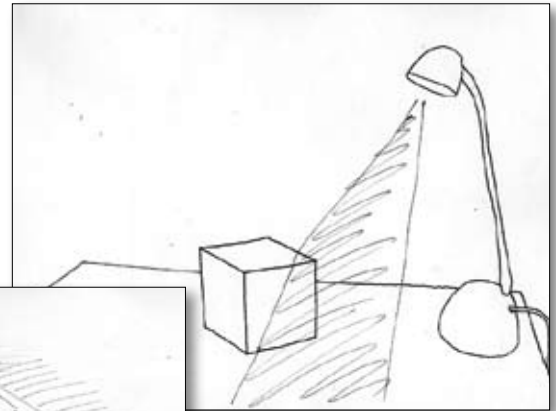
FIG. 3

Analysis of drawings

For the purposes of this paper, each of the visual indicators of dyslexia is illustrated by two figures, one a drawing made by a dyslexic student, and one by a non-dyslexic. Figure 1 is a drawing made in response to the written instructions shown, and indicates confusion between left and right, as well as what is termed 'hedge-your-bets' lines, ones which indicate a lower level of visual motor integration than the line quality and evenness of cross-hatching in Figure 2, for example.

In comparison, Figure 2 shows the response of a non-dyslexic student to the same instructions.

Here is visual indication of accurate mental rotation, and a confidence of hand-eye coordination typical of drawings made by non-dyslexic art students.

Figure 3 is indicative of a student forgetting oral instructions accompanying a line-drawing of the lamp and cube set-up given to each student. Students were verbally instructed to draw the shadows cast by the lighting on the cube, rather than the shape of the light beam, as below.

The same verbal instructions given to non-dyslexic students resulted in drawings such as Figure 4.

A third cognitive process, that of hand-eye coordination, or visual motor integration, can reveal

indicators of dyslexia as illustrated earlier in Figure 1, and in Figure 5, which clearly shows a diffident attitude to mark-making.

Figure 5 also indicates a poor grasp of drawing conventions, in particular the conventions of projection systems such as artificial perspective. Figure 6, in contrast, shows confidence in the use of line drawing and cross-hatching, as well as a good grasp of projective geometry:

Conclusion

Following the 'blind' analysis of the two sets of drawings using the taxonomy of indicators described above, it was found that the dyslexic students were correctly identified by both authors in 70% of cases. This rate of success has encouraged the authors to repeat the experiment on a larger scale.

In addition, it is hoped to be able to use MRI scanning to reveal differences in the regional functional organisation of dyslexic people when drawing by comparing the data to non-dyslexic people also drawing.

The precedent for showing that brain function in dyslexic people differs from that in non-dyslexics performing the same tasks is now well established,
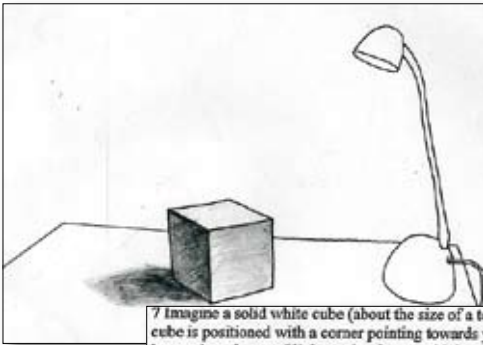
FIG. 4

7 Imagine a solid white cube (about the size of a teacup) on the table in front of you. The cube is positioned with a corner pointing towards you, and it is lit from the top left by a lamp whose beam of light angles down at 45 degrees. Draw the cube as you would see it including the shading on the cube and its shadow:
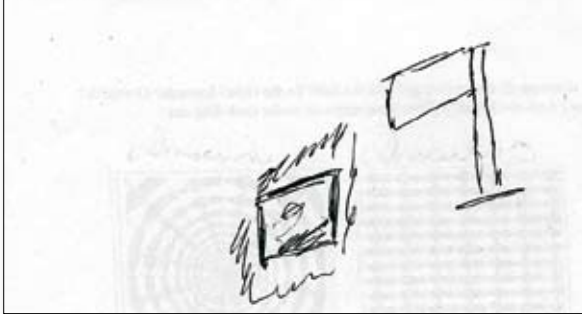
FIG. 6

FIG. 5
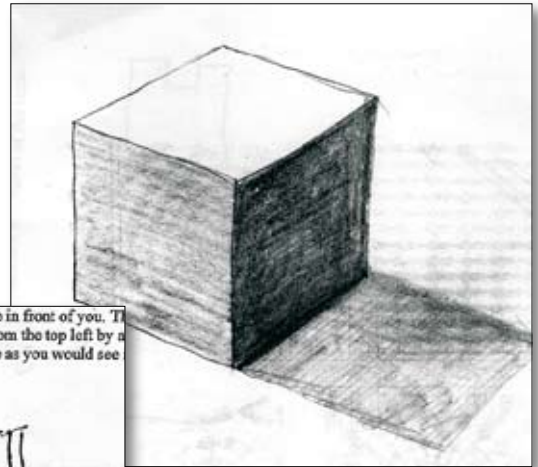
notably by Eden, Van Metert et al (1996) and Robert Solso at Stanford University (2001).

The collaborative research into the relationship between drawing styles and dyslexia undertaken by the Royal College and the Swansea Institute has already helped develop new strategies for teaching drawing which address problems experienced by dyslexics in the drawing studio (Rankin, Davies and Riley 2005, 2005a, Rankin and Riley, 2005) and also has helped develop alternative strategies for the structuring of dissertations which allow the inclusion of multi-modal approaches favoured by many dyslexic students (Davies and Riley, 2005, 2006).

The cumulative aim of these research steps is to determine how brain function varies between dyslexic and non-dyslexic art and design students in controlled situations and how it varies between dyslexic students who exhibit different ability profiles in relation to text, organisational ability, drawing and so on.

The overall aim of the research is to deepen our understanding of dyslexia as a complex phenomenon which can affect a wide range of abilities, positively or negatively, and to understand more about the psychological, physiological and neurological processes which are the origin of these differences. Through this understanding we hope to learn more in general about the relationship between dyslexia and art and design and specifically about the relationship between dyslexia, perception and drawing. This knowledge may tell us if there are real advantages, such as enhanced ability in art and design, which is an assumption that's often made (though in fact has never been proven), as well as disadvantages to being dyslexic. It may also help us in the future to identify, support and nurture more effectively the specific abilities of art and design students and to adapt and develop teaching strategies to enable them to fulfill their true potential as artists and designers, without having to compromise their creativity because of a rectifiable deficiency in this area.

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LEARNING FROM HIGHER ARTS EDUCATION IN DESIGNING CONSTRUCTIVIST LEARNING SPACES: A CASE STUDY OF INQBATE: THE CENTRE OF EXCELLENCE IN TEACHING AND LEARNING IN CREATIVITY

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Abstract

The recent shift towards experiential, student-centred and collaborative learning in line with social constructivist learning theory has implications for the design of physical learning spaces. Noting the natural alignment of traditional arts education with constructivist approaches, this paper explores the potential role for the arts education sector in influencing wider HE estates provision through a discussion of how InQbate: The Centre of Excellence in Teaching and Learning in Creativity has drawn on the experience of the creative disciplines in its design of flexible learning spaces that stimulate interaction and engagement in learning.

Questions

- How are arts institutions embracing developments in digital technologies to enhance their own learning spaces and teaching practice?
- What else can non-arts subjects learn from the arts in terms of constructivist teaching and learning techniques?
- What can the Arts learn from the current trends in learning-space design?

Key words

Collaborative, creativity, engagement, experiential, flexible, immersive, learning space design, social constructivism, student-centred.

Introduction

The aims of InQbate: The Centre of Excellence in Teaching and Learning in Creativity are twofold: to increase the creativity of our teaching, and to improve our teaching of creativity (Childs et al, 2006). This case study outlines how we have addressed these twin goals by drawing on the experience of the creative disciplines in order to design physical learning spaces that support creation-, construction-, performance-, installation- and exhibition-based activities within a social constructivist pedagogical model. We hope that this will act as a bridge for increased dialogue and collaboration between higher arts education and non-arts subjects.

Changes in teaching and learning

There has been much discussion recently about the need to change the way we teach to support emergent generations of "digital natives" (Prensky, 2001) and stimulate their creativity in order to guarantee the UK's place in the knowledge economy (Cox, 2005).

At the same time, over the past 15 years, there has been increasing recognition of the importance of student-centred, situated, and collaborative learning in line with social constructivist learning theory (HEFCE, 2002).

This trend towards a social constructivist approach has significant implications, not only for teaching practice itself, but also for the design of learning technologies and physical learning spaces (De Vries, 2004). Technology, as illustrated by the thriving e-learning sector, has reacted quickly with innovative new technologies based in solid learning theory. Space design has been slower to respond: 52% of secondary schools built in the UK between 2000 and 2005 are considered 'poor' or 'mediocre' - they meet size and safety standards but fail to provide "inspirational learning environments" (CABE, 2006).

Changing learning spaces

Like any space, classrooms shape human behaviours and thus the learning they permit. Traditionally classrooms have been based on instructivist principles, with tutors imparting knowledge and information from the front in a "transmission model" of didactic delivery (Van Note Chism, 2006).

Although teachers are taking up the new technologies, in many cases these are simply being used to reinvent the traditional "blackboard and slate" approach (Cuban, 2001). This is reinforced by the instructivist arrangement of the learning space. A revolution in teaching and learning requires a transformation in how we use learning space and learning technologies. Novel spaces are required to support a new constructivist approach – spaces that encourage collaboration, shared reflection and discovery.

Happily, these are beginning to appear, with recent educational designs displaying features such as flexible, multi-use spaces and social furniture (JISC, 2006). We intend to build on this trend, drawing on the experience of theatre designers and installation artists to create immersive learning experiences through effective use of truly flexible spaces and extensive AV technologies.

Lessons from the arts

The arts have always had a different approach to learning – both in terms of teaching practice and in how they use space. In valuing direct experience and 'learning by doing', traditional arts education, from the Bauhaus on, is inherently aligned to social constructivist and constructionist teaching (Raleigh, 1968). Although not always universally well exploited in this regard, as subjects they are inherently immersive and experiential, involving students in repeated production and performance, and encouraging feedback and reflection by the learner's peers. Also they have largely retained the master-apprentice (researcher-learner) model that naturally supports constructivist learning and the scaffolding of knowledge (Wood et al, 1976). In ideal conditions, collaboration around creative and constructive activities is situated in spaces that support exploration, experimentation and eventual expression.

52% of secondary schools built in the UK between 2000 and 2005 are considered 'poor' or 'mediocre' (and) fail to provide "inspirational learning environments" (CABE, 2006)

By drawing on this knowledge in the design of teaching spaces that lend themselves to creation, performance and installation, we hope to open out the possibilities for innovative teaching and learning.

Pedagogical model of the InQbate design

Although we recognise that all three principal learning theories (behaviourist, cognitive and constructivist) largely overlap in practice, we have concentrated on supporting the following student-centred learning activities in the design of the InQbate Creativity Zones:

- Experiential learning (Kolb, 1984)
- Discovery learning (Bruner, 1967)
- PBL (Savery and Duffy, 1995)
- Constructionism (Harel and Papert, 1991)
- Collaborative and co-operative learning (Slavin, 1990)

At the heart of the InQbate pedagogical model lies the 'operating theatre' metaphor that was associated with an explosion in surgical knowledge two hundred years ago. This focus on peer observation - 'learning by watching' - is a key part of our wider constructivist approach: 'learning by doing', 'learning by making', 'learning by watching' and 'learning by sharing'.

To achieve this, the InQbate Creativity Zones have crossed the traditional 'black box' model of theatre design with the 'white cube' model of galleries in order to create a 'white box' hybrid - spaces that are both flexible, enabling rapid reconfiguration for different activities, and neutral, allowing tutors to easily change their 'feel' and the information available through projection and lighting. We predict that the resulting physical and projected environments will absorb tutors and learners alike in a range of immersive learning experiences, and engage them in constructing new ways to represent and share their knowledge and understanding.

The principal features of the InQbate spaces include:

- A neutral colour scheme throughout, including furniture - this enables all surfaces to become projection surfaces.
- Reconfigurable spaces - moveable walls, mobile partitions and curtains enable the space to change shape, size and feel.
- Flexible and embedded furniture - this enables rapid reconfiguration of the space to support diverse activities with minimal visual clutter and distraction, allowing it to feel both 'open' or 'intimate' as required.
- Multiple display surfaces throughout - a mix of dry-wipe, poster-mount, 'pin-to' and projection surfaces.
- Integrated technology - although richly technology-enabled, equipment can be hidden when not needed to return the space to a 'blank canvas'.
- Integrated AV system - a built-in system of projectors, plasma screens, video-switching and local and surround sound enable the creation of rich projected panoramas and environments.
- Access to nature - extensive windows give views, air and light but can be easily 'blacked out' to create effective projection spaces.
- Good network access - fast connection between the two zones and to the wider internet supports

easy collaboration with remote participants.
- Ambient lighting - flexible coloured LED lighting creates a variety of moods and accent effects.
- Refreshment hub - integrated social spaces encourage continuation of discussion beyond the lesson.

All of these features have been specifically included to engage learners and support constructivist learning activities.

Student-led learning: Discovery learning is aided through the ability to stage 'interactive exhibitions' and 'installations', thereby enabling learners to explore the learning material in a variety of ways. Ownership of learning is fostered by providing open web access and devolving control of the space and technology to learners. Combining facilitative teaching and problem-based learning unites teachers and learners as co-learners within an enquiry.

Situated learning: The flexible spaces support all stages of PBL tasks; from initial group discussion, research, idea generation, negotiation, group working and design to eventual prototype building and testing. Projected environments 'set the scene', cueing appropriate behaviours and supporting scenario and simulation activities. Video conferencing supports access to industry input.

Collaborative learning: Active facilitation of group working by staff is reinforced by considered space design. Large digital display devices and multimedia walls encourage group working. Background projection of CCTV cameras and good network connection between zones stimulate group feedback. Easy control over resources enables groups to 'personalise' their area, encouraging team working and group ownership.

Reflection: Archived CCTV footage and blogging software enable individual and group reflection. Embedded AV technologies and good network connections support frequent, and easy, presentation, critique and peer evaluation and assessment. Online display of work, mounted exhibitions and 'student showcase' events enable wider feedback.

Conclusion

Supporting truly constructivist teaching and learning requires us to change how we design learning spaces. The CETL in Creativity has looked to arts education to design spaces that promote engagement and active learning. The InQbate creativity zones combine the power of AV technologies to engage and inspire,

Novel spaces are required to support a new constructivist approach – spaces that encourage collaboration, shared reflection and discovery

with the spatial flexibility of theatre design, providing learners with easy ownership of content-rich, immersive spaces.

Active involvement of artists and performers in such spaces will stimulate innovative new ways of using the technology and space, ways that can then be shared with tutors from other, very different, disciplines, stimulating them to create innovative teaching to draw students in to becoming active learners.

The challenge now is test the InQbate model across a range of subject areas and to establish a clear evaluation strategy to assess its long-term impact. This is already underway through courses such as Product Design and the CDF-sponsored Ways of Thinking project. More information on InQbate can be found at www.inqbate.co.uk.

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BLUE COLLAR DESIGN THEORY: PROMOTING COMMUNITY HEALTH THROUGH A PARTNERSHIP BETWEEN AN ART SCHOOL AND ACADEMIC HEALTH CENTRE OR AN ALTERNATE APPROACH TO GRAPHIC DESIGN EDUCATION THAT MAKES A DIFFERENCE

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Abstract

Seven years ago, the Maryland Institute College of Art began a partnership with the Johns Hopkins School of Public Health to develop creative public health information that would target the East Baltimore community.

MICA students have an opportunity to understand the power and limits of graphic design, and have to learn to communicate to an at-risk urban community and to medical researchers. The partnership is creating a new model of service learning with enormous potential for design/health partnerships across the country.

This paper will discuss how an art school, academic research institution and a disenfranchised community can work together.

Questions

- Does the course content and course structure of design education change?
- Should design institutions be actively involved in community?

Key words

Community, cultural, graphic design, health, MICA Social Design And Interdisciplinary Education, partnership.

Introduction

Graphic design education has always been fraught with pedagogical dilemmas. These problems are, in part, due to the divide between student desires and instructors' project delivery. For example students seek a realistic and professional educational experience, which is not only important to their education, but also necessary for acquiring the appropriate skill sets to enter the competitive workplace. Graphic design instructors are faced with the complicated task of giving students both technical and theoretical skills in a discipline that needs to be segmented and structured. Therefore the educational experience has been through trial and error in the delivery of tried and tested 'artificial' projects with unrestricted parameters and unlimited time constraints. If instructors attempt to implement real-world projects they struggle with first finding an appropriate client and project, second a workable budget, and third a client committed to

enriching the educational experience of the students. The result has been the implementation of various identity design projects because they fit neatly into the above concerns yet the professional benefits for students are weak at best because they don't get experience in client management, access to a community and multiple delivery vehicles.

A studio course called the MICA/JHU Design Coalition has been developed at the Maryland Institute College of Art (MICA) that meets the professional-practice desires of the students as well as addressing the pedagogical concerns of the instructor. The class also benefits from interdisciplinary education where MICA students work with Johns Hopkins School of Public Health (JHSPH) researchers and students in an at-risk urban community in East Baltimore.

East Baltimore overview

East Baltimore is a poverty-stricken, predominantly African-American, urban neighborhood that begins a few miles from the MICA campus. The vast majority of MICA students have never experienced conditions like those existing in this community. This neighborhood has high infant mortality rates and disproportionately high syphilis and heroin indices. East Baltimore is a violent place to live, has a plethora of single-parent homes, and high rates of unemployment. Fewer than half the children graduate from high school and one quarter of the households fall below the federal poverty level, so one in three children live in poverty. In addition, the lead poisoning statistics in Baltimore City (much of which is concentrated in East Baltimore) have been consistently high for generations. The citizens are prone to hypertension, obesity and diabetes. However, because the challenges of daily life within East Baltimore are so intense, people have difficulty prioritising long-term health issues.

Course history

The MICA/JHU Design Coalition is offered as an elective course every semester where enrolment is open to the entire student population. The graphic design department anticipated that this approach would allow students to self-select the course, reflecting their level of motivation in being involved and committed to the social aspect of the MICA/JHU Design Coalition's course description. It was hoped that students in other majors would also enroll in the course because of the uncertainty that graphic design would always be the appropriate delivery vehicle when trying to assess the needs of the client and community. Students from other majors might also bring other methods of problem solving to the class and provide the course with alternative project solutions. The hope was to always have a diverse student population and a socially responsible partnership between the three communities involved in the projects – JHSPH, MICA and East Baltimore. A key asset of this course was the impact it made on students who could potentially get their work published. In fact students said the primary reason for taking the course was to engage with the client and interact with the community. Of course, they still want to get their design solution accepted by both parties, but this seems to be a secondary consideration.

Course outline

The class initially focused on the needs of the East Baltimore community since this is where the majority of JHSPH research projects are carried out. However, recently the class has been tackling projects in West Baltimore as well.

On the first day of class, as students are introduced to the course, they are instructed on how to define design solutions in a realistic and effective way. Students are asked to understand the differences between client, community leaders and the community identified as the target audience. The students must value building a crucial connection between the target audience and the project results, allowing community members to share in the programme's success, in order to inspire an actual change of behavior, leading to an improvement

The primary reason for taking the course was to engage with the client and interact with the community

Graphic Designer

Linear Transfer of Information

information

Target Audience

Advertising Design
Test products/campaigns on focus groups prior to implementation

Client

FIG. 1: GRAPHIC DESIGNER/CLIENT RELATIONSHIP

Graphic Design [student]

Linear Transfer of Information

information

Art Director [instructor]

Client [instructor]

FIG. 2: GRAPHIC DESIGN EDUCATION

Graphic Design [student]

Voice/Gain Trust

Community Leader

Gateways

Community [target audience]

Speak/Test Solutions

Focus Groups
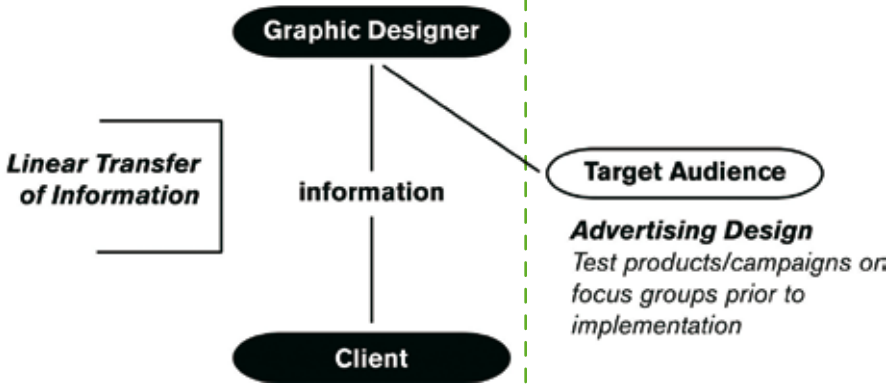
Client
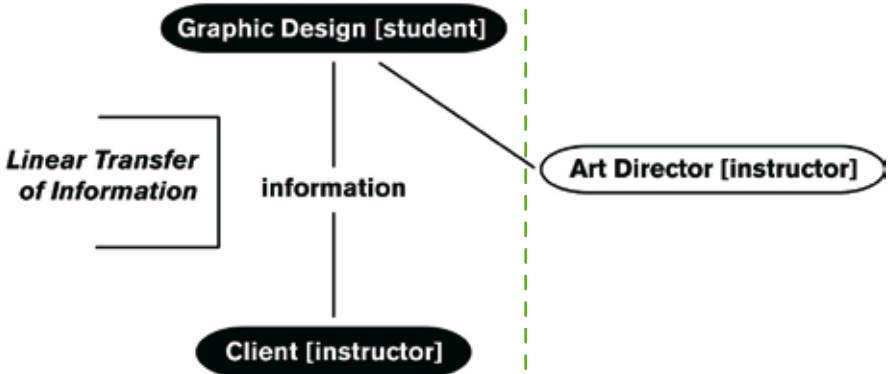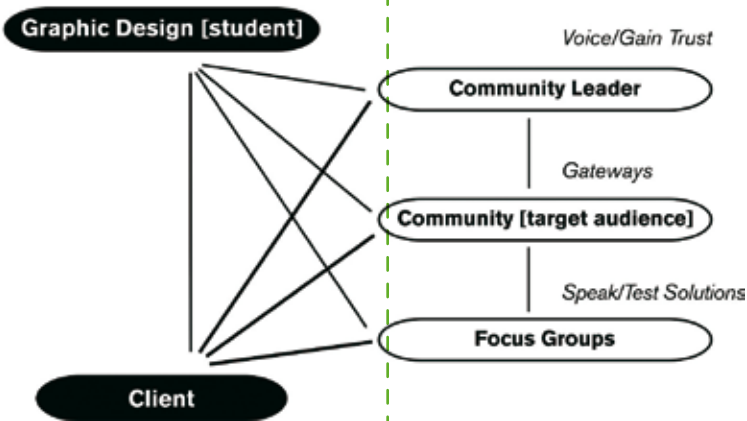
FIG. 3: GRAPHIC (SOCIAL) DESIGNER/CLIENT THEORETICAL RELATIONSHIP
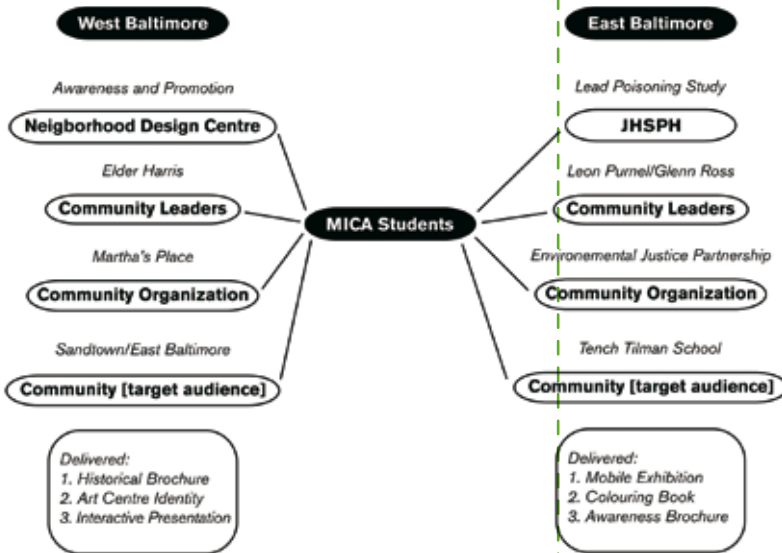
FIG. 4: GRAPHIC (SOCIAL) DESIGNER/CLIENT PRAGMATIC RELATIONSHIP

and responding to specific research-related questions. Specific presentations include: how to target the message to the appropriate reading level, effective use of language and cultural illustrations for an African-American community, and the social-economic realities of the target community. The MICA course instructor provided guidance about design strategies, and how to target a design message to a specific audience. Impromptu community meetings were held in East and West Baltimore, and the JHSPH research teams co-ordinated planned focus groups in East Baltimore and Martha's Place leaders arranged the same in West Baltimore.

in their quality of life. Despite diverse academic backgrounds, the students are encouraged to draw from their knowledge of the graphic design vocabulary and understanding of the industry process and the complications involved in working with actual clients, real projects and target audiences.

Later that day students meet with the clients, who present their research projects and discuss their goals for disseminating results. After the clients present, MICA students go on a community walking tour led by Baltimore community leaders who are familiar with the community and its members. The walking tour strategy proved mutually beneficial, as the community awareness of the MICA/JHSPH partnership increased and the students can demonstrate a tangible understanding of community life. It is important to note that the graphic design department pays the community leader for the services of the community tour. The graphic design department also recognised that the community should be involved at each stage of the process. Furthermore, the project should utilise the already existing community organisations as "Community Gateways" (discussed below) for testing possible design solutions and for disseminating information.

Throughout the 16-week semester, client and community leaders periodically present to the class with the goal of further clarifying the research results, increasing sensitivity to the community,

Community gateways and social design

There is a great disconnect between East Baltimore and Johns Hopkins communities. This disconnect has been developed over generations in part because the East Baltimore neighborhood surrounds the Johns Hopkins Medical University campus. The university is continually expanding and displacing East Baltimore residents out of the communities that they have grown up in and become familiar with. Another reason for resentment is because Johns Hopkins researchers have tested many of their research projects on the East Baltimore community residents and yet do not inform the community of the findings after the research has been completed.

Recognising that bridges must be built to connect the parties, or messages from the partnership would fall on deaf ears, a strategy to reach the East Baltimore community was developed. This became an essential focus of the partnership and was spearheaded by MICA in order to minimise community resistance. This additional goal was essential in implementing the primary goal of gaining acceptance of the health message within East Baltimore.

Community Gateways are defined as entities that have already earned the respect and trust of the

community. MICA, with the assistance of JHSPH personnel, would build upon and strengthen these relationships. The Gateways would be engaged in focus groups and meetings to test potential design solutions and served as a resource to students seeking information about the community.

It was realised that a new strategy of graphic design education was needed for this course to allow students to both navigate and understand the complex relationships between community gateways and client. The normal paradigm of graphic designer/client relationship (as shown in Fig. 1) did not apply to this course. SEE FIG. 1.

We can see the industrial relationship between the graphic designer and client in Figure 1. Information flows from one group to another through a series of meetings and presentations where mutual needs are met to implement the project. The graphic designer responds to the client's needs and establishes the appropriate visual language and delivery vehicles. In some graphic design companies, and in most advertising agencies, project strategies are tested, prior to implementation, on a specific audience. It is important to note that even when the project is tested on this group, information still primarily flows between client and designer. SEE FIG. 2.

This framework has become the accepted model of graphic design education where the instructor acts as client and student as designer. The graphic design instructor switches between client and art director. The informational process is linear between student and instructor and the projects are mainly theoretical and based either upon pedagogical needs or instructors' experience. SEE Fig. 3.

This figure demonstrates the initial graphic designer, client and community relationships. It was thought that this framework would allow students to respond to client and community needs by placing themselves between both communities. The matrix becomes far more complicated where information not only passes from client to graphic designer (student and instructor), but also from graphic designer to community leader (who in turn acts as the gateway to the community), and community leader to client. The graphic designer has to acquire social networker skills as well as act as a mediator and designer. SEE FIG. 4.

This final figure shows the position of the graphic design student in an actual project where they are placed in the middle of the client and community.

This framework is complex where information passes between three major constituents. There are two different projects at different locations in Baltimore. Students acquire important communication and problem-solving skills when they interact with these constituents. These skills are essential in the development of the students' educational experience and industrial practice.

Conclusion

It is clear that there is a need for graphic design students to become involved in socially responsive work because it broadens both their education and their understanding of complex partnerships. The MICA/JHU Design Coalition addresses both the social and pragmatic areas of design education. Students are instructed on how to use their skills to better society and to learn how to deal with both clients and community in a constructive and creative way.

It was initially thought that students would learn more about the relationship between graphic designer and client, and understand the dynamics of the community. In fact students have said that they find out more about themselves from the community and client. The class becomes a reflective journey as the student questions inequality in an inner-city community. Many students have taken the MICA/JHU Design Coalition course two, three or even four times, with some students deciding to seek employment with studios who focus on social issues. Some students' are employed in medical publication departments, and some are enrolled in socially related PhD programmes. Many companies have contacted the graphic design department expressing the reason they employed MICA students was, in part, because of the work produced and experience gained in the MICA/JHU Design Coalition course.

There continues to be a commitment to strengthen the partnership between MICA, JHSPH, and the East Baltimore community and to see this partnership as a positive model embraced by other academic institutions to improve community well-being.

SO, WHO IS NORMAL?
(DIS)ABILITIES AND
ARCHITECTURAL EDUCATION

Dr Jos Boys, University of Brighton, UK

Abstract

This paper explores relationships between disability and architectural education. It addresses some of the problems in dominant modes for conceptualising disability, outlines the effects on current learning experiences and proposes some suggestions for rethinking how issues of disability/diversity might be better integrated into the learning and teaching of building design. The paper ends with some ideas about how concepts of otherness - including disabilities - can offer a *critical modality* (Wilson, 2000, p.159), that is, a site and a methodology for investigating our assumptions about who and what is 'normal' in architectural and related pedagogic practices.

Questions

What methodologies are currently in use for incorporating diverse users into design learning and teaching; and how do we evaluate their effectiveness?

Why do the languages of accessibility and inclusive design fail to 'fit' within contemporary approaches to the learning and teaching of architecture and related subjects?

How can we rethink the experiences of deaf and other disabled people theoretically, practically and creatively so as to enable their greater resonance and impact on, architectural and design-related education?

Key Words

Architectural education, cultural theory, design methods, design teaching and learning, disability, disability studies, diversity, identity, social inclusion, users.

Thinking (dis)abilities

As Erevelles writes:

> "…disabled people have historically been located at the margins of the margins of our social world in spaces that have been construed as irrelevant to the economy, society, culture and even radical theory." (Erevelles, 1997, p.1)

She suggests that in much contemporary theory (across feminism, post-colonial and cultural studies etc) this marginality is being perpetuated because disability is merely being added onto other 'identities' as a cursory inclusion. She links this to the recent cultural turn, whereby older articulations of simple binary differences – in terms of race, class, disability, gender, sexuality, age etc - have been replaced by a new interest in multiple identities. In this approach the writing of social difference on different bodies is engaged with through concern with "the (re)signification of such bodies to (re)possess emancipatory, transgressive, hybrid subjectivities that continually transgress borders and open up unlimited possibilities" (Erevelles, 1997, p.1). But, she argues,

From conceptual art practices to building design methodologies, much more poetic, personal and desire-oriented approaches have come to the fore over the last 20 years

this new articulation is based more on theoretical bodies than concrete ones. These are romanticised, often eroticised versions of transgression, unhindered by bodily limitations or disfigurements:

> "The disabled body is a nightmare for the fashionable discourse of theory because that discourse has been limited by the very predilection of the dominant, ableist culture. The body is seen as a site of "jouissance" that defies reason, that takes dominant culture and its rigid, power-laden vision of the body to task…The nightmare of the (disabled) body is one that is deformed, maimed, (…) Rather than face this ragged image, the critic turns to the fluids of sexuality, the gloss of lubrication (…) But almost never to the body of the differently abled." (Davis, 1995, in Creal, 2006, p.3)

Across architectural and art and design theories, practices and pedagogies, I suggest that these newer engagements with difference via the body have had a considerable - and often positive - impact. From conceptual art practices to building design methodologies, much more poetic, personal and desire-oriented approaches have come to the fore over the last 20 years. In my subject area of architecture and interiors, for example, we no longer frame designers as neutral and objective professionals or users as abstract types with singular identities, but have developed more evocative, non-linear and creative methods for visualising and designing material spaces.

The problem of accessibility

However, we need to ask why, whilst these newer conceptualisations may articulate designers/artists, users/audiences and the relationships between them as much more partial, complex, hybrid, nomadic and participatory, disability so often remains separate, ill-fitting or invisible? Contemporary architectural and educational practices have certainly reflected the wider cultural shift from medical to social models of disability, that is away from a 'special needs' approach to a focus on the barriers (both physical and attitudinal) which prevent deaf and disabled people from engaging in everyday life. But rather than this leading to the better integration of disability and diversity into design education and practice, it has, I suggest, merely ended up reinforcing two already existing false dichotomies in the discipline - between practical/technical and conceptual/poetic modes of operation, and between users/designers.

In fact, the disabled body is mainly still treated resolutely in the older functionalist way, at the practical/technical end of architectural considerations. This is both in how 'the problem' of disability is framed and in ways in which it is required to be 'overcome'. Concepts such as inclusive design and accessibility predominantly aim to make disabled bodies more 'normal' through the addition of designed devices (ramps, platform lifts, grips). Thus, the emphasis of the social model on the importance of physical barriers – to be resolved by their designing out – appears to enable architectural solutions, but fails to challenge the underlying assumptions of disability as an 'abnormal' condition.

Here individual deaf and disabled people come to stand for/conform to a whole category of medical impairment, their particular desires, preferences and personalities left without a 'space'. The rich experiences, responses and strategies of different deaf and disabled people to their material surroundings are thus flattened out into a single-dimensional access-related relationship.

In addition, deaf and disabled people are still predominantly stereotyped as passive, childlike users of services rather than active, adult creators. I have written elsewhere about the problematic definition of users in architectural education in relation to disability (Boys, 2007a). There I argued that deaf and disabled people also fail to fit much contemporary architectural discourse because both the frameworks of accessibility and transgressive narratives are built on an ideal of a mobile, autonomous and unencumbered subject. But deaf and disabled people cannot be categorised so conveniently; and they do not have the privilege of such autonomy. Rather than perceiving this as a problem to be fixed or ignored, we could instead see it as a challenge to our assumptions about who is 'normal.'

Finally, locating deaf and disabled people predominantly within the separate category of accessibility leaves them over-exposed as a difficulty for designers - somehow 'different' - people whose needs can only be met through a series of awkward-to-achieve, yet basically technical (thus banal and dull) solutions. What is more, in design teaching and learning, these solutions are perceived as being 'added' to the more important and initiating conceptual ideas or processes - as a drag or a

The frameworks of accessibility and transgressive narratives are built on an ideal of a mobile, autonomous and unencumbered subject

potential undermining.

Deaf and disabled people therefore find themselves inadequately represented in either older, functional or more contemporary, poetic modes of conceptualisation within architectural education – ways of framing the world, I should add, which are not of their making. How, then, can we conceptualise disability in architectural education differently?

Revaluing (dis)abilities

Most immediately, then, design theories and practices need to begin to undo this hegemony of the normal/abnormal binary and "to institute alternative ways of thinking about the abnormal body" (Davis, 1995, p.49). We need to understand more about how particular framings of disabilities are perpetuated and to listen to how deaf and disabled people themselves articulate their lives. This is not by generalising from various medical conditions or 'requirements' but by learning about the many different and creative strategies deaf and disabled people develop to deal with the inadequacies of the material world.

Most importantly, this needs to be developed within a broader conceptual framework. Capturing and responding to a variety of experiences is not just a matter of relativism: of merely accumulating different perspectives, opinions or actions. Our bodies first and foremost are the point of view that each of us lives as subjects; but we also are bodies-for-others, as our corporeal realities interact. This recognises that different bodies have various characteristics, like height or weight, "as part of the normal diversity of the human community" (Creal, 2006, p.7). But we can also be alienated bodies, positioned into taking someone-else's view on how our body is defined. The post-colonial theorist Homi Bhabha (1994) has shown how the patterning of stereotypical identities into binary divisions (such as able-bodied/disabled, white/black, male/female, old/young) where one term

is marked in common-sense as superior to another, represents attempts to naturalise particular versions of how society works, in support of specific relationships of power and inequality. The location, conventionally, of the disabled body with the functional, objective, clinical and technical in architectural education is based on such a patterning and conspires to perpetuate its lowly status within the discipline.

But Bhabha also shows how such attempts at imposing such an order on the world are always partial and ultimately unachievable. In addition, deaf and disabled people do not live the stereotypes of disability; they live their many different relationships to them. How, then, can we shift the false dichotomies between normal/abnormal, poetic/practical and passive/active in architectural and design-related education? I suggest we need to open up our assumptions and methods, both to other ways of articulating the everyday socio-spatial intersections of material form and its occupiers; and to new forms of negotiated spaces between the many participants in the design and building process.

Making discursive spaces

Our experiences of a collaboration between deaf and disabled artists interested in the built environment (www.art-architecture.co.uk/insideout) and interior architecture students from the Department of Architecture and Design at Brighton University offers some interesting possibilities (Boys, 2007b). In this case, the artists were not articulated as users or clients but as mentors to, and colleagues in, the students' design projects. Through a short series of shared exchanges of work-in-progress, the aim was to explore what kind of 'discursive spaces' might begin to open up ways of rethinking relationships between disability and architectural design.

Most immediately, for the students, working with deaf and disabled artists intensely heightened their own awareness of their everyday physical and sensory surroundings, usually too easily lived in a state of distractedness, particularly by the young and mobile. It offered ways of beginning from poetic practicalities, focusing on capturing, analysing and responding to the immediacy of physical and sensual experiences

between bodies, each other, objects and spaces.

In addition, the project quickly unravelled any stereotypical assumptions about what disabled people are 'like', or what they 'need'. Starting from the narratives of seven individual deaf and disabled artists blurred many boundaries around what counts as disability, how use and accessibility might be defined, and what constituted practical and/or creative responses to disability. It also required students and staff to face up to how we, the non-disabled, are discomforted and make awkward by disabled people, especially the more that 'normal' standards of ability, appearance or behaviour are not met. At the same time, it enabled an openness to the concept of the differently abled – of a valuable focus on the range of experiential and emotional relationships we all have to the material world. As Damian Toal, one of the artists, explained:

"As disabled artists and users, we are forced to constantly evaluate form and function and engage creatively with practical problems around negotiating space. This emotional and physical engagement with space allows for a much broader debate around how we as people relate to architecture and space. While the work of the artists does address considerations of inclusive design, what it also challenges and encourages is a philosophical and creative engagement with multifunctional and often transgressive use of space." (Toal, in Boys, 2007b)

Beyond current assumptions

In this paper I have suggested that thinking about disabilities in architectural education beyond either meeting the functional norm or imagining new transgressive bodies inserts some challenging questions into architecture and related design subjects. To move towards this kind of critical modality around (dis)abilities and architectural education of course needs more pedagogic research and many more exploratory projects like Discursive Spaces. It also requires the development of more learning resources around (dis)abilities beyond either accessibility or theoretical figurations of the body. In the UK, this is in the context of the HE sector's duties under the new Disability Equality Schemes. Whilst the initial aims of these has been supporting people with disabilities into higher education, the follow-up stage is in developing 'inclusive campuses' where disability-related issues

are completely integrated into everyday teaching and learning for all students and staff (www.ecu.ac.uk/ guidance/disability). Whilst this paper raises more questions than it can answer about how to do this across architecture design-related education, I suggest that the issues are now both urgent and pertinent.

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STRAND B3: INTRODUCTION: CRITICAL AND CREATIVE PRACTICES

David Clews and Anne Boddington

In this strand, trigger paper authors consider how processes of creativity are particularly shaped by their disciplines. These papers also ask how deliberate practice, appropriate situations for learning and reflective practice assist learners in becoming creative experts.

There is a growing sense in which art and design teachers and practitioners appear to be surprised by the emergence of creativity as a focus for academic development across education at all levels and in all subjects. This has also resulted in concern and a degree of anxiety as to how, if all disciplines claim to be creative, do the creative arts, design and media effectively articulate their distinctiveness?

The effectiveness of the UK's Quality Assurance Agency (www.qaa.ac.uk) Subject Benchmarks in enhancing the delivery and outcomes of undergraduate education may be debatable. However the method of their production, by practitioners and informed by consultation across the disciplines meant that they at least represented the articulation of the nature and scope of disciplines from the perspective of various communities of practice. According to David Buss, across the 46 Subject Benchmarks, only eight use terms derived from the word "create". Those using related terms most frequently are Music; Art and Design; Dance, Drama and Performance; Communication, Media, Film and Cultural Studies; and Architecture, Architectural Technology and Landscape Architecture. It transpires: "Less than half of the statements contain more than two usages, while eight make no use at all." (Buss, 2007).

In an earlier analysis, Professor Stuart Laing, Pro-Vice Chancellor at the University of Brighton examined the relationships between creativity, professionalism and culture in the Subject Benchmark Statements for Art and Design (A&D), Communication, Media, Film and Cultural Studies (CMFCS) and History of

Architecture, Art and Design (HAAD). He notes that although the latter makes few references to creativity or professionalism, both A&D and CMFCS make frequent use of the word creative, linking it explicitly to other terms including imagination and professional. He also observes how in A&D "creative work is informed by professional practice" and, in CMFCS that there is "a very close identity between concepts of professional practice/standards and of creative production" (Laing, 2002, p.109).

Models of creative synthesis developed in the 1960s stressed the importance of unconscious strategies, exploiting and guided by specific conceptual matrices such as backward reasoning and the generation of analogues. This almost Freudian model emphasised the need to release the unconscious and seems to underpin most theoretical modelling in the late modern and contemporary period, with the stress firmly upon the creative individual to 'come up with the goods'. However, more recently there has been an emphasis on strategies for stimulating creativity by letting go of "creativity without preconception", or "the removal of method or model" (Singerman, 1999) and a growing awareness that creativity is neither unconscious or context free. Jeffcutt and Pratt (2002) also argue that creative practice is more directed and that the application of disciplinary and occupational skills is a key component of the creative condition supported by specific contexts and organisations that allow creativity to flourish and that "creativity is a process requiring knowledge, networks and technologies that interconnects novel ideas and contexts." In his analysis linking creativity with professionalism. Laing (2002) draws our attention to the ways in which arts, design and media see their creativity linked to the activities of professional occupations. This is as true of those practices more closely aligned with

The application of disciplinary and occupational skills is a key component of the creative condition supported by specific contexts and organisations that allow creativity to flourish

both commercial practices and those sited in public subsidy and not-for-profit sectors. However, the argument for the teaching and learning of professional skills, attitudes and behaviours is not limited to their potential application in employment but that they should be situated as central to being creative in the discipline.

Several key papers have sharpened these debates with respect to arts and design education. Massey, in *Developing Creativity for the World of Work* (2005) discusses the types of creativity in professional studies for arts and design students. While Judith Mottram observes that "Cognitive science now sees deliberate practice as one of the conditions for creative activity", but also claims that "task repetition" as a way of acquiring facility in technique (in this case drawing) has declined in art schools (Mottram, 2007). The UK's Department for Culture, Media and Sport's task force on Further and Higher Education (DCMS, 2006) claims there is a direct link between creativity and entrepreneurship in the creative industries and the Cox Review (Cox, 2005) has claimed that the specific creative skills of design graduates can contribute to improving the performance of non design-based commercial enterprise.

The Arts Council's paper *The Power of Art* (ACE, 2006) demonstrated how the visual arts contributes to communities beyond education, and recent work undertaken by the Design Council and Creative and Cultural Skills Sector Skills Council identifies creativity as a major driver of industry. The National Endowment for Science, Technology and the Arts (NESTA), in a series of recent papers similarly suggests there are powerful links between the creative capacity of individual owner managers of creative enterprise and sustained growth of the creative industries (NESTA,

2006). Finally, *Creating Entrepreneurship* (ADM-HEA, 2007) argues for greater differentiation in developing creative entrepreneurship in arts, design and media education. This aspect of curriculum development will be a particularly important factor for growth in this sector given the significant numbers of graduates working in production areas of creative industry, for example: up to 65% in film and TV (Skillset, 2005) and 41% in design (Design Council, 2005).

In the first of these trigger papers, Hearn and Quinn assert: "The craft of design is the use of thinking and making to translate… ideas… into three-dimensional representations". However, echoing Mottram (2007) they ask whether the "craft of design", the physical act of making is an endangered premise. Helen McGilp and Jimmy Stephen-Cran offer an account of Masters of Design (Textiles as Fashion) students using a "Creative Process Journal" to support "research-based learning" through the way practice is explicated. They ask to what extent this idea is adapted to, for and by students with "disparate specialisms and skill sets". In her paper, Ivana Wingham claims that the "creative process of design is unleashed" as students negotiate the relationships between ways of making work about the city. Ken Neil and Patsy Forde raise the idea of creativity as a negotiated and contingent idea in the school of art. In particular they situate their discussion in respect of contemporary policy drives, specifically claims made for creative graduates in the Cox Review. Finally, in her paper on assessment practices in the fine arts, Susan Orr discusses notions of connoisseurship and the relevance of communities of practice to the assessment of fine art outcomes and products.

How, if all disciplines claim to be creative, do the creative arts, design and media effectively articulate their distinctiveness?

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THE CRAFT OF DESIGN

Kathryn Hearn and Anthony Quinn,
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Abstract

The craft of design is the use of thinking and making to translate real or undigested ideas into a three-dimensional representation. This is the pivotal point in a design's gestation. The success of an object does not rely on the physical reality of the maquette, instead it is more concerned with its spirit or essence. Does the model capture the philosophy of the idea? Is it exciting, despite being made out of sellotape and balls of paper? Our hypothesis is that the spirit of endeavour in trying to transform the ethereal idea into its first rudimentary physical representation is the hidden or forgotten 'craft of design'.

Questions

- Is the premise that the *craft of design* is endangered valid?
- Should we be worried that so many student designers are solving their creative needs in a virtual world?
- In a teaching and learning context, does the tendency to favour the computer before the haptic experience diminish the quality of the design outcome?

Key words

Craft, development, haptic, making, maquette, material, model, representation, translation

The craft of design

The craft of design (Hearn and Quinn, 2006) is the art or more importantly the craft of translating an idea from a virtuality, a notion, a vague thought to a physical entity - creating a model or a *maquette*, which houses the theory, the genetic code of your design. More often than not it will evolve through the act of translation. Sometimes it will evolve tangentially to your original thought process, almost always it will evolve beyond the capacity of the original idea trapped somewhere in our heads.

Isn't the craft of design a contradiction? Are they not mutually exclusive entities? We have been told that craft is an artisan activity whereas design is an intellectual activity. This notion is reversed by modern designers, such as Hella Jongerius, Satyendra Pakhale and Thomas Heatherwick. All of these people evolve their ideas through a craft exploration. Taking an idea and exploring it in the head and the hands, backwards and forwards until it becomes real.

In the following paper we intend to discuss this concept further, examining the context, expanding a theory for the craft of design and interrogating the concept with a range of international designers.

Have design students become beguiled by the sophistication of computer aided design, are they losing the skill of making models and prototypes? Does a student designer need to make three-dimensional sketches during the design process? Most designers would say it is vital. So why do many student designers believe they can make one model and it be sufficient to 'solve' the design problem? Designers of many years experience will make four, five or six models. Is this lack of patience and tenacity endemic in student designers or are courses expecting too much? In the age of all things CAD, when we can even print things three-dimensionally, it seems more important than ever to ask this question.

In recent months we witnessed the near demise of the British model plane company Airfix. Part of the reason, no doubt is that children these days prefer the quick-fix of the Playstation or Gameboy and are no longer prepared to invest hours in glue and patience. One artist, who undertook a number of residencies in schools was amazed that the children quite routinely did not know how to handle scissors at the age of eight. If Lego and Airfix have

been replaced by computer games, then it makes sense that craft would give way to CAD. Increasingly children and students are not experiencing enough making within their creative education and gaining confidence in their abilities, to appreciate the value of the process of making.

> *"Secondary teachers are, in the main, specialists, although many are trained in fine art and lack design and craft experience. In addition, larger class sizes, limited time and space and the cost of resources mean there is an overemphasis on two-dimensional work and the use of secondary source materials, and insufficient opportunities for pupils to work in three dimensions."* (OFSTED, 2004)

As ceramic designers and educators we believe that design has to be experienced three dimensionally before its true quality can make itself known. On the BA Ceramic Design course at Central Saint Martins College of Art & Design we have witnessed the cumulative effect of changes in education and young peoples' hobbies on the aptitude of our new students.

Should we be worried that young people are solving so many of their creative needs in a virtual world? As educators of designers we have become increasingly frustrated by the lack of manipulative making skills and tenacity in the physical working in three dimensions of these potential designers. Why is this? Are we out of touch with the abilities and needs of the future design environment, or is it that the educative background from which these students come have ill prepared them for starting to become fluent designers for the 21st century?

Our interest in the craft of design started here, encouraging students to use materials such as clay or plaster to realize *maquettes* as part of a design's development.

The craft of design is the use of thinking and making to translate real or undigested ideas into a three-dimensional representation. This could be said to be the pivotal point in a design's gestation. The success of an object does not just rely on the physical reality of the *maquette*, it can also be more concerned with the spirit or essence of the object. Does the model capture the philosophy of the idea? Is it exciting, despite being made out of 14 Post-it notes, a paper clip and judicious amounts of Sellotape? Our

hypothesis is that the spirit of endeavour in trying to transform the ethereal idea into its first rudimentary physical representation is the hidden or forgotten 'craft of design'.

Making three-dimensional notations of an idea can provide an opportunity to take risks, experience the rawness of the concept without being seduced by a visual in two dimensions. It presents the creator with the reality of that transient idea that can be handled, experienced and judged.

Designers and their *maquettes*

In order to explore the craft of design we spoke to a number of designers about the role of making in their work: Constantin Boym, Kuno Prey, Shin Azumi, Ana Mir, Emilio Padros, Renny Ramakers, Satyendra Pakhale, and Maxim Velcovsky. The most surprising aspect of this venture was how eager and passionate these designers were about the importance of making in the design process either as visualisation or inspiration.

Constantin Boym shares our concern that the ability to make, as well as draw, may not be as evident in a young designer's skill set. Says Boym: "The idea of crafting, like making something is already a disappearing skill. What interests me is that the prototypes are an example of craft today because even though designers don't often make their objects by themselves, they almost always make their prototype." (Boym, 2006).

Kuno Prey, who as well as working as a designer is Dean of the Faculty of Design and Art at the Free University Bozen, Bolzano, finds that designers are willing to spend much more time on CAD renderings rather than on making three-dimensional forms which could convey so much more. He comments: "I have students for example who lose many, many nights making renderings. They forget the piece, forget the details, and forget the scale… they are so concentrated on making the right surface with the right illumination." (Prey, 2006).

Often a *maquette* bears little physical resemblance to the final form, but is likely to share an ethos or feeling of the final design, capturing the spirit or essence of the concept in a three dimensional object. Even though the idea may be early in its development, it raises a clearer understanding for everyone, as Kuno Prey explains: "From my experience, the 3D rough model is very important. It communicates, not

If Lego and Airfix have been replaced by computer games, then it makes sense that craft would give way to CAD

just with you, but also with the producer, because if he sees a drawing it can be ambiguous. He might imagine something and you imagine something, but often it goes in different directions and this is not so good for the project." (Prey, 2006).

Clients

Initially a *maquette* may be used to clarify proportion, scale or a line for the designer, but later the model might be used to present these thoughts to the client. The use of a *maquette* to communicate an idea is pivotal in the relationship between the designer and the client. Fancy drawings, cross-sections, CAD renderings reassure a client that their designer is doing all the 'stuff' that a designer does. But often the client struggles to interpret these vital parts of the process, especially if the client is a retailer or buyer rather than a manufacturer or designer. Constantin Boym reflects: "I show models to clients because it kind of awakens the child in them, gives them a chance to play. If you show them a picture, they look at it, they get serious. The minute you show an object, you know, a little house, they're looking this way, that way; it gives them a good mood. But it's not just about mood, it's also about conditioning the perception of the project that it is something a little more light and acceptable." (Boym, 2006).

The first-edition *maquette*, by definition has a role to play in the design development process, expressing, informing, explaining, communicating or eradicating preconceptions. This is likely to be superseded by more sophisticated models, which build upon the original idea, creating a complex evolution of the design process. Without this first notional object, attempting to harness the ideas that flit in and out of the designer's consciousness, the design process could be severely stifled as the idea may not be given the opportunity to show itself as a design worth

consideration. This moment of bravado mixed with terror, when an amorphous material becomes the model of a teapot, is vital in communicating ideas from the virtual to the real.

Shin Azumi enjoys the fact that "even on a basic level a paper *maquette* can express the sense of three dimensional beauty in a very good way" (Azumi, 2006).

Materials

Many designers select the modelling material of their choice by previous experience and history rather than appropriateness. In some cases the use of obscure materials such as toast or chicken wire adds to the poetry and wit of the object.

When designing through materials one is able to capture some of that spirit which the material offers in the *maquetting* process. However, many designers see it as a much more contained process. When we asked Kuno Prey whether the modelling material itself informed his design thinking, he was very clear in his response: "No, when I make a model any material is good, but I look for the easiest and cheapest materials. But this doesn't influence the final decision. The final material comes from function, production and the cost." (Prey 2006).

On the other hand, Ana Mir is adamant that the "quality of the materials is super important. It is a big thing. Shape is something almost like and it helps of course, but the most important things are the quality of the materials rather than the shape." (Mir, 2006).

Designers who explore materials respond to the intrinsic nature of those materials in their design process. Satyendra Pakhale asserts: "In the studio we use computers, we use everything - all the software - but the thought starts in your mind, in your feeling. You put it on paper as a sketch or a scribble. You put it in a computer in a very basic form, but it never gets

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finalised there, ever. I make sure it doesn't happen in my studio ever. We always make a model." (Pakhale 2006).

Through such discussions with designers, it became apparent to us how vital the three-dimensionalisation process is. The *maquette* is a designer's legacy. Leonardo da Vinci's sketches of his inventions reinforce his genius, and so the *maquette* made by the designer enhances understanding of the design, its inception and its author. All the designers we interviewed warmed to this idea, as Constantin Boym said: "I think it is an amazing educational pool and I personally love seeing this in the shows about other designers." (Boym, 2006).

Our call to raise awareness of this endangered craft in the face of the CAD evolution is not a Luddite call to arms in the face of innovation. Instead it's a challenge to designers to recognise the importance of the hand in the design development process. 3D printing has its place as do balls of newspaper and sticky tape. As Maxim Velcovsky states: "I think the computer is, in a way, like a pencil. It helps the designer create his idea but there are many ways to work with it. I would never rely on a computer 3D visual, inspiration comes in my studio when I see the plaster and the material around me and I test it." (Velcovsky, 2006).

The *maquette*, the point where the idea and its three-dimensional representative inhabit the world without recourse to manufacturing or market limitations could be said to encompass the essence of design activity. When you see somebody in a department store, thoughtfully holding a fork, testing weight and balance, it is at this point that the consumer's act of enquiry exactly mirrors the investigations of the designer.

The 'craft of design' is a research project being undertaken by Kathryn Hearn and Anthony Quinn at Central Saint Martins College of Art & Design in London.

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EXPLICATING THE CREATIVE PROCESS WITHIN A POSTGRADUATE FASHION CONTEXT

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Abstract

Current Fashion Design literature focuses, almost exclusively, on the 'finished' design and little is written (or even spoken) about how designers arrive at these end products. This paper offers an account of the Creative Process Journal (CPJ), an innovative method for research based learning through the recording, analysis, evidencing and explicating of practice within the specific context of the taught postgraduate programme Master of Design (Design Practice: Textiles as Fashion) at The Glasgow School of Art. The authors describe the CPJ process and theory - which has evolved over the four years of its continued development - alongside excerpts and examples.

Questions

- One size does not fit all. In developing the programme for other courses, how do we accommodate students who have disparate specialisms and skills sets (eg practical/conceptual/theoretical/IT/transferable etc)?
- What are the implicit and explicit values of different presentation formats for the Creative Process Journal?
- What are the functional relationships between the essays, studio practice and the Creative Process Journal?

Key words

Case study, Creative Process Journal, critical reflection, practice integrated research, recording practice, research based learning, research log.

Introduction

We propose, through this paper, to examine the Creative Process Journal (CPJ), an innovative method for research-based learning through the recording, analysis, evidencing and explicating of practice within the specific context of the taught postgraduate programme Master of Design (Design Practice: Textiles as Fashion) at The Glasgow School of Art. From the outset, we would like to distinguish the Creative Process Journal approach from "learning journals" (Moon, 1999) often employed as a learning method as well as for personal development. Although similarities and overlaps exist, the CPJ has its roots in case study methodology (Gillham, 2000), as described below.

The CPJ approach

Current Fashion Design literature focuses, almost exclusively, on the 'finished' design and little is written (or even spoken) about how designers arrive at these end products. Most students of art and design keep some record of the process of making, usually in the form of sketch books, notebooks and annotations. This aspect however, is usually sporadic, and often discarded or hidden, with the focus on the final product. The CPJ course, which has evolved over the past three years, explores the role and value of methodically recording and analysing practice.

The process

The process of developing an individual CPJ is an iterative one. Throughout the Masters programme, students are required to keep a *research log*, faithfully observing and documenting their practice *as it happens*. The log includes descriptions of methods, approach and current understanding as the student progresses through the year. Typically, the student would be identifying sources of ideas and inspiration, plotting explorations and directions, recording successes as well as (importantly) failures and inevitable compromises.

Within the fashion and textiles design context, external constraints have a significant influence on the

creative process. These might include aspects such as access to manufacturing, availability of materials, human body shape and movement, even gravity, as well as budgetary restrictions and available time. Their positive and negative effects are monitored through the log.

At its core the log contains detailed written descriptions based on direct observation. It also includes a range of approaches to documentation such as photographs, rough sketches, drawings, diagrams and videos, each representing different aspects of the process appropriate to that medium. Physical artefacts such as swatches and sewing notions may also be included.

At the beginning, the focus is very much on creating and gathering a comprehensive array of evidence in multiple forms. From this rich and varied collection of raw data that constitutes the research log, the student undertakes a process of interrogation and critical reflection; sifting through all material, selecting, writing and editing to produce the CPJ which is a *formal submission* integrating text and visuals or other media to detail the 'creative journey'.

The Creative Process Journal is grounded in and often incorporates elements of the research log, as in the following short excerpt:

"… 'one out of five worked. What a waste of time! I am so angry. Devore is not as fun as I thought.' Looking back I am embarrassed by my impatience. I wanted to give up too soon. I hate wasting money and forget that mistakes are a good thing." (Vickers, 2006)

The process of interrogation supports the student in examining their role as designer and maker. They are encouraged to review their original design intentions against their evolving practice and draw out strengths and weaknesses in their process.

"I often lose sight of the wearer and of a possible garment. As a result my designs have become too busy and unwearable. Making these working drawings has made me realise how important it is to use decorative textiles with care." (Barry, 2006)

The Creative Process Journal is written for a notional 'outsider', and in making the narrative clear for others, it clarifies aspects of their practice for the student.

FIG. 1: THE CREATIVE PROCESS JOURNAL

There are three CPJ submissions in total: one at the end of each of the three stages of the year-long programme. The focus of each shifts to reflect the current emphasis of their practice. The first CPJ examines *Origination*, including areas such as previous experience and practice, skills and knowledge brought to the project, influences and inspiration. The following short excerpt from a first CPJ explores one student's initial motivation and thinking towards developing his collection.

"On one hand I am thinking "This is my very last year of studying, so I should stick to my strengths and do what I do best so I can produce a collection to my full potential", whereas on the other hand I am thinking "It is good to be pushed out of my comfort zone and try something different because this will make me more versatile as a designer and benefit me more in the long run." (Gillan, 2006)

The second CPJ focuses on *Progression*, and includes areas such as provisional plans and intentions, first attempts, identifying strengths and weaknesses, influence of tutors and peers, analysing difficulties, and emergence of direction. See Vickers (above) for a short excerpt.

The third and final CPJ focuses on *Evaluation*, and examines areas such as what has been learned, key stages, personal discoveries and judgements, feedback from others, what might have been done differently and the final work alongside initial expectations. See McLeod (below) for a short excerpt.

Managing and supporting the individual CPJ

Various approaches have been adopted to support the individual development of the Creative Process Journal. Discussion sessions have prompted students to articulate aspects of their work, describing and questioning practice. This activity offers the student cohort access to alternative methods and processes and additionally supports and clarifies written descriptions as well as verbal presentations.

FIG. 2: THE CREATIVE PROCESS JOURNAL – CONCLUDING THOUGHTS

The CPJ works in parallel with three essays, one to be developed during the period of each of the three journals. Each of the three essays: the *Historical Framework* Essay, the *"Ugly"* and *"Beautiful"* Essay and the *Contextual Positioning* Essay, have also been developed to stimulate critical reflection. Subsequent influences on the creative process are reflected in the CPJ.

The approach of having three submissions throughout the course rather than a single final journal at the end has been developed to mark the different exit points within the programme, and in doing so better supports the process. Each journal requires the student to interrogate and formally present their ongoing log. This helps to clarify the student's position while the information is still relatively fresh, and each iteration feeds into the next. Formal review offers feedback at each stage.

Concerns and preconceptions

The primary anxiety for the student has been that the activity of observing and recording might 'get in the way' or inhibit the creative process itself. Some practitioners have informally expressed their concerns that the 'demystifying' of the creative process might 'jinx' it, or expose their individual approach as unconventional or improper. In practice, these anxieties have proved foundless. Each student has developed a method of observing and recording which works alongside and supports their practice. The analysis of the research log helps the student gain insight into their creative process and develop this further, as described in the excerpt below:

> *"Keeping notes for my Creative Process Journal has brought definition and order to my usual cryptic shopping-list style of recording ideas. It has been very useful for preparing my end-of-term presentation and has made me document ideas that I may otherwise have lost. I can refer back if I feel I need clarification and I can trace back where ideas have come from. It helps to keep my work relevant and organised and my mind focused."* (McLeod, 2006)

Preconceptions of the journal process need to be addressed early in the course to ensure depth of evidence developed. The focus on detailed description can be rejected at first as 'too obvious' by the student. However it is the meticulous describing and recording of each aspect of the creative process which underpins and offers validity to the final narrative. The approach can also be dismissed as 'too personal'. However, all evidence is of value in constructing the narrative, and the first-hand nature of the writing can offer a level of authenticity (a personal voice) often lost in traditional academic writing.

The value of the CPJ

The CPJ has three primary benefits. It is used as a tool to help students to reflect and better understand their work and methods, *creating knowledge*. It is used as a

form of *communication* primarily between student and staff. And it is used as a form of *exegesis*, or critical explanation, in place of a formal thesis, evidencing the formative work and learning of the student.

The learning outcomes of the CPJ are for the student to: gain advanced knowledge within a Textiles as Fashion context; challenge, analyse and interpret their individual design process and apply, present and communicate those findings in a purposeful and effective manner; make objective judgements alongside a personal philosophy in relation to the issues raised by their fashion concerns and; recognise, understand and develop an individual creative identity and locate an appropriate fashion context for their ideas.

Although not an original intention of the CPJ course, another (secondary) benefit emerging is its use as a programme-quality enhancement mechanism. Through the reflective and evaluative nature of the journals, they can be used to assess strengths and weaknesses of the programme itself. The observations, grounded in the research log, tend to be 'deeper' than those turned up through questionnaires.

Delivery
Over the three years of development, two key principles in the delivery of the course have emerged. The first of these is in setting the correct *balance* of studio practice and CPJ work. In an intensive course, there is much competition for time, and focus must remain on the creative practice. Currently, the CPJ constitutes 20% of the overall marks of the programme. Assessment and feedback by both the specialist CPJ tutor and studio staff has been important for the CPJ to remain embedded within the Masters programme.

Presentation
The various components which make up the final CPJ are integrated through the use of 'digital media'. The majority of students on the programme have had little or no prior experience in the use of software for the layout of text and images. The learning of these skills therefore also form an integral part of the course, whilst maintaining the working balance described in 'Delivery' above. Given that the journals themselves are not 'design objects' or 'artists books', the students have responded thoughtfully to the challenges that the integration of these elements can bring in developing a clear narrative.

Although the final journals created within this programme tend to be bound 'hard copies', digital submissions are also encouraged. All final journals are digitally archived for access by staff and students.

Future potentiality
Possibilities for adapting the course within other programmes and disciplines, such as performing and live arts offer a potentiality for the CPJ - to support practice-integrated research and as a method for practitioners to better understand and evidence their creative process. Some work has already been undertaken in developing the CPJ within other contexts. It is important to note however, that as with all case studies, the findings described here are not necessarily generalisable as the context is very specific, even within design.

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CREATIVE PROCESS OF DESIGN: CONVERSATION AND TRAVELLING BETWEEN CONCEPTS AND TECHNIQUES

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Abstract

In summary, this paper tries to demonstrate how, through a year-long design programme with Masters students, the creative process of design may be unleashed through conversation, conceptual and technical 'travelling', image production, film making, mapping techniques, book and diary writing, self reflection and group work, workshop and real experience, and how the role of creativity lies in the process of travel between all these aspects, each of which is part of the design process. These aspects converse in each individual project, but students also benefited from understanding the design process as a conversation that is non-linear, and which innovates new approaches to the city.

Key words

Book, brief, composite drawing, conversation, diary, experimentation, field trip, film, narrative, non-linearity of design process, technique, traveling.

Brief: a trigger to a creative and responsive conversation between teachers and students

It is often assumed that during the course of a year a design teacher gives a series of briefs that start from conceptual thinking and culminate in a proposition of a kind – which in architectural studies is often a building structure. In addressing the urban condition, this idea can be challenged. Firstly, proposing a single built construction in an urban context does not necessarily mean that a coherent urban strategy is achieved in the process of designing such an idea. Secondly, the city operates and grows in time and the lives of the people who inhabit it. So, a brief that wishes to deal with an urban condition needs to take into consideration the non-linearity of the creative design process in relation to the contemporary city.

In the final brief of this year's Masters in Architectural Studies, The City as a Void, the students were asked to think about the city as a void, a space between the buildings in which their own journeys and films, made in the first semester, led them towards innovative, multiple, urban propositions. To start with, they were asked to think of "The Programme Story" for the city of Valetta, Malta.

Using films made in the first semester and associated innovative map drawings, the students were asked to consider "real and imaginary characters that move through the city and between buildings". Combined with their own 'diary' depicting the series of everyday events that they experienced on their Malta field trip, the students were asked "to combine the two into a creative and imaginative spatial programme – a story in today's situation for a Valetta of the future". In addition, the brief asked that the "programme should consider the stage of the day (early morning, late morning, noon, brunch-time, lunch-time, afternoon, coffee-time, early evening, late evening, night-time), as well as seasons (summer, winter, autumn, spring)".

The 'programme story' was a series of 'menus' that the city may 'consume' and each entry of the programme menu should be named in such a way. For example the spring 'menu' may have a space that denotes an action called "a flower-picking room". The summer 'menu' may have a space called a "jellyfish wall". When making a programme of the city, the 'menus' were to present their temporal connection with the times of day and season, and also contain illustrations from the earlier film, notes of the diary, as well as other additional inventions.

The second part of the brief "City as a Void asked students to create "The 'cut' – a composite drawing of the city's void". The idea was that as their own mapping techniques developed in their previous,
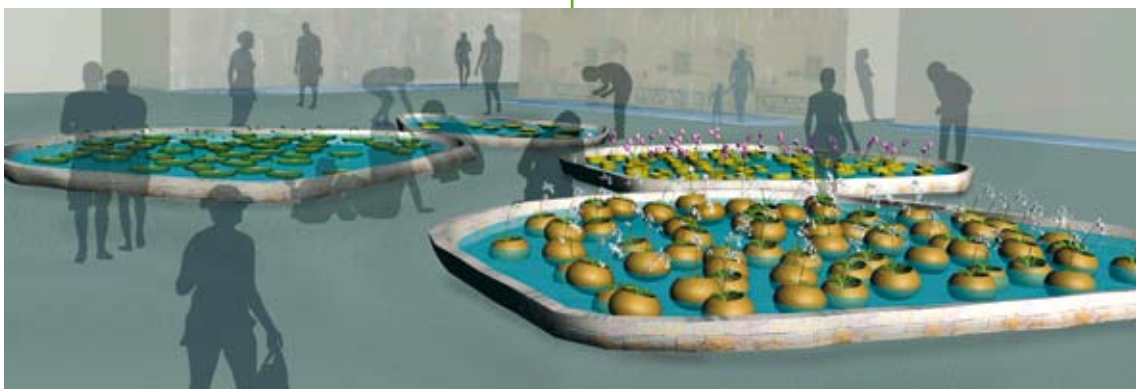
TOP: FIG. 1: HUI TSENG, RAIN MARKET. BOTTOM: FIG. 2: HUI TSENG, FLOATING FLOWER POOLS

first-semester projects, they would create such a cut "depicting invisible lines of stratification of the city that may fill the void of such a cut". By incorporating water lines, land lines and map lines from their previous maps and films, the students were asked to rework the visual field of the ordinary architectural sections into three-dimensional spaces.

This brief triggered a variety of individual responses from students. Through conversation in the studio, some students took the 'menu' to be a seasonal programme for the city with proposals like "rain market" for summer (Fig. 1) or "floating flower market pools" for spring (Fig. 2). Another proposition considered the menus of prehistory, Moorish and Napoleonic occupation, and the Second World War, to inspire a literal cut into the landscape of Valetta to lead tourists from ocean-liners through Malta's history by taking them into a museum (Fig. 3), or inside the hotel room (Fig. 4). Other responses considered interactive surfaces that would instigate responsive spaces (Fig. 5, Fig. 6) while another strategy

considered in-between spaces of existing buildings and courtyards by turning them into ice-cream areas (Fig. 7), spaces for meditations (Fig. 8) or mapping the city's light spaces (Fig. 9).

The idea of teaching and learning in the studio turned into a process similar to the idea of travel, in which understanding was not a product to be obtained but a process to be experienced through conversation.

Experimentation: travelling between concepts and techniques

While debating the nature of programmes and their appropriate representation through the process of conversation, this approach involved experimentation with a variety of ideas and techniques. From hand drawings, to computer drawings, model making, film and animations the students were 'travelling' between conceptual thinking and creative production.

The programmes given in the first semester aimed at building students' conceptual and technical skills so they could adapt to a way of working between
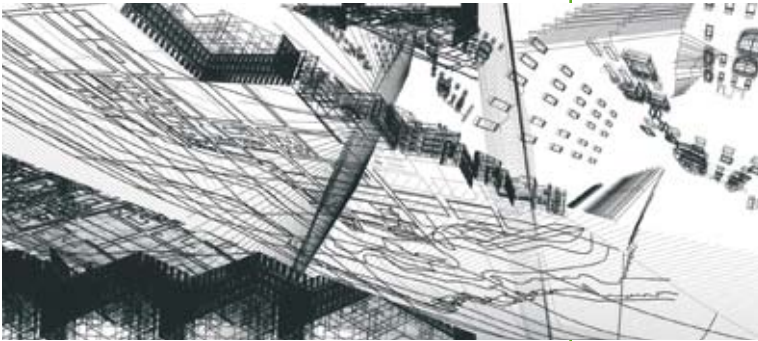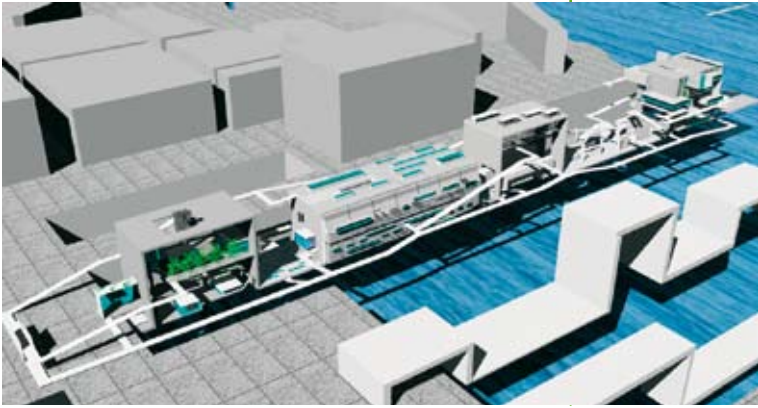
CLOCKWISE FROM TOP LEFT:

FIG. 3: CHUN-HAO CHIANG, WAR MUSEUM

FIG. 4: VALENTINA AUROVA, FILM CLIP FROM EMPTINESS

FIG. 5: DONG WANG, INTERACTIVE SURFACES

FIG. 6: DONG WANG, INTERACTIVE SPACES

ideas. For example the "Voyage" considered the production of three maps: water, land and port maps of a particular world city-port. A "Water Map" was to be a drawing of "lines of movement on and below the water surface". Students were asked to create their own, unique taxonomy of the invisible lines of movement on the surface of the water (lines of movements of cargo boats, ferries, cruisers, small sporting boats, sailing boats, water skiing boats, wind surfers, fishing boats, police boats, custom patrol boats, marine life research boats). They had also to notate everything protruding from the surface of the water (rocks, lighthouses, icebergs, small islands, oil-rigs, etc). In addition they were asked to trace lines of historic battles, or historic routes of food, plant or animal transport from different parts of the world that were significant in the past for the chosen port. They were also asked to "notate the movement of particular shoals of fish and jellyfish (that may be seasonal) which happens under the surface of the water".

A "Land Map" was to consider "a drawing of land

movements on which the port city is situated. It was to be a drawing of the land below the buildings, the topography of the port with its rocks, and vegetation, street and pavement lines but not architecture, on which landlines of movement are shown." This map was to show the lines of movement between the docks and the city, the lines of movement of vehicles that pick up goods from boats and take them to the city and beyond into the country, lines of transport of fish from the port to markets or food factories for further repackaging, preparation and export, the movement through the main thoroughfare to the city from the port, the sloping sites of the port city, the vehicle lines (buses, cars, trams, transport vehicles, bicycles, motorbikes, taxis) and so on.

Finally a "Port Map" was to show everything built – the walls, the buildings, the courtyards, the terraces and gardens, each with different lines. Unlike a typical map, this map was to be a map of the different boundaries that exist between public spaces and the interior of buildings, noting different

transitional zones in large and small spaces, different materiality of the walls, gates, edges, entrances, openness and enclosures. This map was to be a still map, an arrested image of architectural boundaries and transitions. The edge of a garden is different to that of a terrace, different to a large public building and different to a private residence. The small shop area or a café and taverna should be differently drawn from a marine research centre and the town hall or the edge of a public park, parking lot or shipping centre. Again, like other maps, their own taxonomy of lines, thicknesses and the way they are drawn should best evoke the space that such lines enclose.

The "Voyage" brief started a conversation between techniques, while thinking about ideas. Students made models and photographed them, or cut out paper through which projections were made and photographed. They also created drawings by hand-scratching surfaces or by computer using poetic calligraphy or historical narrative. By exploring different techniques, the creative response was unleashed through narrative and conceptual thinking but also through technical experimentation. These drawings also started to define a student's own architectural language, which was later used as a strategy for "The City as a Void" programme.

Book as a process and Diary as a record of experience

In experimenting with concepts and techniques, the students were asked to produce a "Book of Ideas" that would depict the process of their investigations while critically reflecting on the examples they looked at and on aspects of their own work. The book was to be read as a stand-alone element of their portfolio and complement the maps and images that were the product of such thinking and experimentation. Each small book should demonstrate a particular area of research in map-making. Through writing, storyboard techniques and invention of their own names for each map, the students were creating their own research context through practice.

In addition to the book, the students produced an individual Diary of their own experience from a field trip. The diary was an exercise in perception and memory, but also an individual student's focus on the city of Valetta. The diary was a source of different views of the city, experiences obtained through travel in a foreign place, location of sites that may be interesting to the student at a later date and a collection of various events that were experienced either as a group or as an individual.

Film: a narrative of events

During the field trip students produced short films in small groups of three in which they located their own narrative in relation to the city of Valetta. Each of the films detected a particular aspect of Valetta playing with its history, its walls on which shadows were projected and with its dreams based on particular readings of spaces or paintings. These films sparked particular journeys from the main entrance of Valetta to the edge of the city walls and the sea, and used scenarios, images, film sequences, sounds and transitions to depict the atmosphere of the city, scratching below the stone surface of the old city into its imagined past and possible futures.
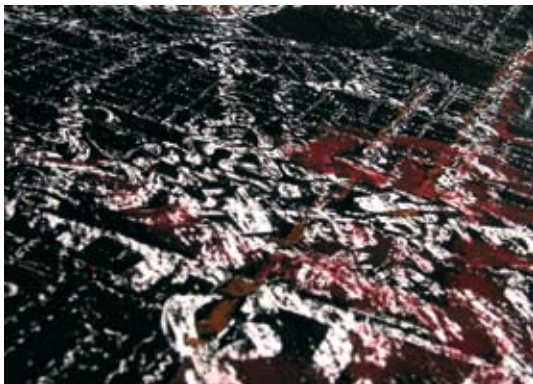
Field trip workshop: a composite drawing

While in Valetta we rented a large castle-like house in a nearby village in which we would all draw in the morning workshop led by John Andrews. The drawing reflected on what we experienced the day before, and created a matrix of interconnected lines and events with views of the details of the city. Worked in parallel with the films, they were also drawings that lay between the storyboard of a film and an abstracted view of the city based on each student's experience. In addition, while working as a group on each individual drawing in the Mediterranean courtyard of orange and lemon trees, and while listening to music, the students were slowly eased into the process of heightened perception and relaxed responsive conversations. In such a space, travelling as a real journey and as a journey through concepts and techniques opened up the creative process of design through conversation.

Conclusion

In summary, this paper tries to demonstrate how, through a year-long design programme with Masters students, the creative process of design may be unleashed through conversation, conceptual and technical 'travelling', image production, film making, mapping techniques, book and diary writing, self reflection and group work, workshop and real experience, and how the role of creativity lies in the process of travel between all these aspects, each of which is part of the design process. These aspects converse in each individual project, but students also benefited from understanding the design process as a conversation that is non-linear, and which innovates new approaches to the city.

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CRITICAL LOGIC OF CREATIVITY

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Abstract

In this trigger paper we present three elements for further discussion in-conference, and each with equal brevity. These are: 1) a context for understanding creative education as a long-held and, in many respects, unfulfilled ambition for the school of art; 2) a sketch of the current environment for creativity with reference to pressing agendas such as the Cox Report; and, 3) a case study of our own from The Glasgow School of Art as a model of dialogical creative learning which sees students negotiate a definition of creativity in partnership with school pupils less affected by the affectations of institutional, discipline-based fine art and design.

Questions

- Can we see creativity as a long-standing and non-hierarchical fundament of the school of art, a fundament which is yet to be fully realised?
- In what ways is a long-standing creativity agenda for the school of art enabled and imperilled by government imperatives such as the Cox Report?
- How might ADinED, our case study, open out onto a reprioritising of creativity over discipline specificity?

Key words

Cox, creativity, hierarchy, pedagogy, politics, tradition, wider access,

Still waiting

Twenty-six years ago, an ICA exhibition curated by David Thistlewood entitled *A Continuing Process: New Creativity in British Art Education* took stock of the dramatic changes to art education in the 1950s and early 1960s. In the opening paragraphs of his catalogue essay, Thistlewood made a crucial point very clear:

"The aims and objectives underlying a post-school art education in this country have changed utterly during the past twenty-five years. Principles which seem today to be liberal, humanist and self-evidently right *would have been considered anarchic, subversive and destructive as recently as the 1940s…What prevailed was a system devoted to conformity, to a misconceived sense of belonging to a classical tradition, to a belief that art was essentially technical skill."* (Thistlewood, 1981)

Pedagogical ambitions which held that the technical could be turned and applied to creative ends "were absent from the curricula in force just after the war, when traditionalists found themselves teaching ex-servicemen and others whose tolerance of pointless academicism was low" (Thistlewood, 1981). The violently human experience of war cast clear light on the instrumental structures of the traditional art-school environment.

Thistlewood singled out four crucial players in the post-war transformation of art education in Britain: Victor Pasmore, Richard Hamilton, Tom Hudson and Harry Thubron. Although he acknowledged their very different backgrounds and inspirations, as well as the diversity of their approaches to teaching, Thistlewood summarised their shared ideals:

"Their only consensus was in these unifying principles: an ideal learning environment is one in which an individual may discover his own aptitudes and test the relevance of his own ideas: in such an environment art might accrue incidentally. And the notion 'Art Education' should be replaced by 'Creative Education' – a total development of sensibility and intellect." (Thistlewood, 1981)

The implications of this are still being (too?) tentatively explored nearly seven decades later. The consensus described strikes at the very heart of the traditional idea that the school of art is necessarily a structure in which the student is led through a discipline towards the mastery of an art or craft. Unless of course, as some do suggest, and we might be amongst them, that creativity is itself a craft or art or discipline which could supersede our present sector leviathans. After all, can we now see the traditional discipline chrysalids of Design & Craft and Fine Art naturally begetting creativity as a timely highest common denominator? Perhaps the determined exploration and refinement of creative activity as an end in itself could usefully steer Design and Fine Art into sub-categories?

This prospect, which is resident in Thistlewood's summary logic, raises for us a primary question: must a student be versed in a discipline at all before he or she can rightfully claim substantive qualification in a holistic and creative development of sensibility and intellect?

Creative markets

Pasmore et al took a lead from definitions of creativity set out by Herbert Read in his *Education Through Art* (1943). Read made the case for treating creativity as a threefold endeavour comprising the activities of: A) self-expression, B) appreciation and C) observation. Self-expression is, as we would imagine, a project of answering an innate need to communicate thoughts and feelings to the self and others. Appreciation is about paying attention to the language and expressions of others. Observation is what we now understand as critical reflection. That activity which we would evidence in studio through Design Process Journals, Critical Notebooks, Reflective Logbooks and so on.

> "The activity of observation – *the individual's desire to record his sense impressions, to clarify his conceptual knowledge, to build up his memory, to construct things which aid his practical activities."* (Read: 1943)

Although understood by Read, and Hudson especially, as still instinctual, this third category in Read's analysis lends itself these days, commonly, to what we wish to classify as the 'technology of creativity'. That is, limited constructivist educational methods

which formalise themselves as the decided routes to being creative. For today's technologists of creativity, strategies and methodologies of observation remain constant while, it is assumed, self-expression and appreciation change and improve with the application of the teaching technology.

Sir George Cox, commissioned by the Treasury in 2005 to scrutinise and champion the role creativity plays in business, defined the concept thus: "Creativity is the generation of new ideas – either new ways of looking at existing problems, or of seeing new opportunities." His given context was made clear with the corollary suggestion that new ideas might emerge by "exploiting emerging technologies or changes in markets" (Cox, 2005). New thinking apropos creativity in the school of art maintains that a disciplined and systematic training in what might be broadly termed 'Read's Category C' will see a parallel advancement in self-expression and appreciation.

An inhibitor of genuine creativity, we suggest, is the fetishisation of constructivist technologies of creativity, partly under the banner of classroom transparency and partly under pressure from Cox-led external agendas. This is a misapplication of Read's Category C which is guilty of packaging well-worn studio tactics of creativity for resale in a commercial context or for redistribution internally through professional skills classes. We are confident that Cox's recommendations are highly relevant to the art and design sector, and confident that his recommendations will not be met, internally or externally, by the sensation of creativity rather than the actuality of creativity's vital critique of normativity.

Artists and Designers in Education: Creative GOALS (ADinED)

For the last 17 years the Department of Historical and Critical Studies at The Glasgow School of Art has been running Artists and Designers in Education: Creative GOALS (GOALS = greater opportunity and access to learning in schools). This is a credited placement project in which undergraduates from the Schools of Fine Art and Design elect to participate in a short course in which they are placed in primary and secondary schools which have low rates of progression to HE. The GSA students devise and deliver art projects with children from ages three to 18. The project has been serially funded by external local authorities through a variety of initiatives,

acknowledging the positive impact that art students with their particular skill sets and self-reflexive knowledge have in a parallel educational context.

Since 2000 the project has been funded by GOALS, a Wider Access initiative working across the West of Scotland. Over the 17 years, 1,500 students and graduates have worked with 25,000 children. The impact upon the GSA students' learning experience is significant. Working in a live context with children requires, of the students, commitment and flexibility and meets a real need and motivation to have their education contextualised in a socially meaningful way.

Dialogical rather than solitary, externally grounded rather than constantly figured in line with internal educational presuppositions, the ADinED project provides an experiential bridge within a value-based framework which allows the students to reconceptualise their studio experiences, and hence their deeper understanding of what it is to be creative. This is achieved in conversation with schoolchildren who are yet to fall prey to the conventions and vanities of symbolic creativity too prevalent in the schools of art. Importantly, dialogues between GSA students and art teachers help to resist the conventionalising of creativity based on what art schools require for entry. This notwithstanding, it is vital for us not to treat the school and its resident staff and pupils as a test-bed for the playing out of missionary zeal. The pupil is to be a partner in the educational exchange and not, as Freire cautioned, a receptacle for the familiar good news of HE.

For discussion in-conference is the centrality given to the dialogical determination of creativity in current Fine Art and Design education. We wish to foreground ADinED: Creative GOALS as a model which allows constant movement between Read's Category A and Category C activities towards a substantive development of sensibility and intellect.

Summary

If creativity proper is to be understood as something other than the structures which might give rise to it, as indeed it must be, then technologies of creativity must resist becoming, despite huge pressure for resale in new markets, normative and formulaic. By continually exploiting the quintessential aspect of renewal within genuine creative education we might usefully come to see aspects of art school discipline

territories as, in some respects, anachronistic and non-dialogical, over-burdened as they are with the formal niceties of their internal constitutive media.

We see the art school as a location for creative education through art and welcome the challenges to discipline conventions which that logic brings about. We wish to argue for a renewed appreciation of that which binds all disciplines at the level of substantive creativity. ADinED might be a productive discursive case study in this discussion, one which resonates with a socially orientated demand, as was the case immediately post-war. A demand which insists on moving past the academicised modes of even the most putatively interdisciplinary subjects to reclaim something creative from the formulae of art and design.

That said, in an elaboration of this sketch, we intend to navigate a course between the gung ho who would peddle the sensation of creativity in answer to a peculiar and expedient version of Cox and the perennial socialist ideologue who contra-Cox can only see education in the art school as a bid "to understand, criticise and struggle against the productive, reproductive and ideological functions that institutions perform for capital" (Dennis and Minter, 1978). Creative outlooks are required for our understanding and application of creativity as a commodity-catalyst for business innovation and for creativity as a necessary driver for critical dissent.

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LEARNING THE ARTFUL PRACTICE OF ASSESSMENT IN FINE ART

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Abstract

This trigger paper explores the concept of connoisseurship in relation to fine art studio-based assessment practices. Reporting on my doctoral research, I explore and problematise the journey from fine art student to fine art lecturer by focusing on tacit practice, group marking and communities of practice. Employing the concepts of connoisseurship and inter-subjectivity I seek to unpack and analyse the assessment approaches adopted by experienced fine art lecturers.

Questions

- To what extent is it possible to make the assessment of fine art explicit?
- What is the role of group marking in art and design studio-based assessment?
- Does this paper have any implications for the ways that we prepare students for assessment?

Key words

Assessment, tacit practice connoisseurship, fine art, intuition, judgement, moderation, objectivity studio, subjectivity.

Learning the artful practice of assessment in fine art

How do fine art lecturers learn to assess student artwork and how is this assessment expertise best understood? I explored both of these questions by carrying out interviews with fine art lecturers and by observing studio-based marking moderation meetings. In this trigger paper I explore the complexity of the journey from art student to art assessor by focusing on tacit practice, group marking and communities of practice.

The fine art lecturers I interviewed stressed the experiential, collegiate aspects of learning to assess through their "lived experience of participation in

the world" (Wenger, 2004, p.3). In the words of one respondent: "Em, I guess that most of [learning to assess] would have initially been through colleagues."

The lecturers stressed that they become adept at making judgments about students' artwork over time. The very fact that they assess many times every year is offered as evidence of their ability to make informed judgement:

> "We're gonna make judgements in quite an intuitive way and... and there's, potentially, there's a problem around that because you could say well these judgements... they're not in any sense rational, they're not based on anything, there's no rigour about them and I think it's completely normal because you know we... these are judgements that we make over and over and over and over again so we become quite adept at them."

The experience of carrying out assessment with other colleagues over time enables these lecturers to build up a "rich store of 'insider' or specialist knowledge" (Morgan and Wyatt-Smith, 2000, p.129). One way to understand this is to view the fine art lecturer as a connoisseur who has an intuitive understanding of "the characteristics of a fine performance" (Morgan and Wyatt-Smith, 2000, p.129). Shay (2005) refers to this shared insider knowledge in the plural as the interpretive frameworks that are constituted in and through assessment community membership. Thus what appears to be individual assessment expertise is better understood as expertise that is co-constructed through dialogue within communities of practice. One interviewee illustrates this by describing how he has become an 'informed subject':

> "I would refute the notion of subjectivity as the be all and end all. Obviously we all have subjective responses to things but there's a difference

between the, em, occasional subjective response and what we might call a professional subjective *response and a professional subjective response is, you know, one that assumes and expects a much more informed response about what the different territories and critical fields of debate are that exist in.., in.., in the specialist school of fine art at the moment [...] and have in recent years, em, been apparent, you know. I think then you add to that all the different, em, cultural differences that, em, in our increasingly multi-national education world we, em, enjoy coping with and* we create a position of being an informed subject *[my emphasis]."*

The assessment of student artwork is a social practice and as such includes aspects of tacit practical knowledge. Bourdieu's understanding of practice is of use in this context because it "specifically excludes mastery of its own logic" (Jenkins, 1992, p.58). As one respondent illustrates: "You know I think that you can….you…you kind of in…em…you get to know a lot of stuff but you don't always know that you know it."

Knight (2006, p.438) observes that "there is much that is indeterminate about human thought and achievement" and specifically, in fine art, Dallow points out that "art is, in a sense by definition [..] difficult to pin down, definitionally or conceptually. If it was not it would no longer be art" (Dallow, 2003, p.49). Thus the very elusiveness of the practice defines the practice. Percy (2004) carried research into the crit, where she identified that lecturers use very imprecise language and often resort to gestural language to communicate about student artwork. During my interviews there are numerous examples when lecturers trail off mid-sentence or offer sentences that are very open-ended. I offer one extract to illustrate this point:

"Em, so that's, you know, I find that quite interesting, so the criteria, I mean you know, the criteria for different modules is kind of, em, very specific and we… but we found ourselves using… I mean I find it odd 'cause we just… we have to kind of… we use the same language in each level but it has to be slightly less, less of a… less of a, an excellence or something and I find sometimes there's too much repetition in the way we do that."

These sentence fragments illustrate, in a very powerful way, Knight's (2002) point that we do not have conscious access to all that we do when we assess students' work. It is at these points in the transcripts (see extracts below) that we are offered tantalising glimpses concerning tacit practice and intuitive approaches to marking:

"I was trying to say something… trying to form something about the work having a.. the maker having some sort of genuine relationship to the work… can't quite work out how to say it."

"I remember, you know, just thinking it was all kind of… almost like a sort of implicit knowledge that was going on about why something was valuable or good or better than, something better than another thing, em, or better work or art or had more coherence or more something or other."

My argument is that these sentence fragments are not inarticulate. Instead, they offer insight into the challenge of verbalising the tacit practices associated with assessing student artwork. Price (2005, p.223) identified that discussion "facilitates tacit knowledge transfer" and several of the respondents commented that intuitive approaches become more apparent through dialogue:

"And maybe your perceptions of where [the students] are in terms of assessing is different to other people. Sometimes that comes out in, em, assessments when you're assessing with other staff."

Arguably, art as a discipline is tolerant of intuitive approaches (Atkinson and Claxton, 2000) because the assessment of art is a multi-sensory affair where the eyes apprehend the work but it can often also be touched, smelt or listened to. Thus, in fine art, the non-verbal is recognised as significant. Atkinson and Claxton (2000) discuss the challenges of asking teachers to render their intuitive expertise in words and they stress that intuition is not 'anti-rational or anti-intellectual' (p.1). Intuitive responses to artwork are not unknowing, unlearnt or wholly individualistic. As Brawm usefully reminds us, intuition comes from the word tuition (cited in Atkinson and Claxton, 2000). As such, it is a learnt social construct. Thus assessment rigour resides in shared frames of reference in the assessment community. In this paper I seek to test out alternatives to techno-rationalist

assessment perspectives that traditionally associate rigour with objectivity and neutrality.

The shared frames of reference referred to above are continually being contested and (re)constituted through group approaches to assessment. Collegiate, dialogic approaches to learning the practice of assessment were threaded through the lecturers' narratives. An individual lecturer's assessment practice is "a practice located within a network of practices" (Shay, 2005, p.668). The lecturers in this study viewed group marking as a means to contain subjectivity. Thus group marking is represented as a shield that protects lecturers from their own subjectivity. The extract below implies that individual subjectivity is minimised or cancelled out by group marking:

> "The subjectivity, whether you like it or not, has got to come in at some level but this is why, certainly here at… we have quite a large marking panel […]. We will have four people, em… just to try and get around that subjectivity that may creep in because then you can… well you've got four kinds of views so hopefully it's gonna balance out. You get a good sort of average overview of the work."

One lecturer discusses the ways that a single mark emerges from the collective views of the group. He expresses this more succinctly than perhaps he intended when he says that in group marking meetings "people take on board these different viewpoints". His intended meaning suggests that group marking offers a site for individual markers to 'take on' the group's views, but as well as this, group marking increases his self awareness about his own 'take' on assessment. The assessment community of practice creates and shares a particular subjectivity that is better understood as inter-subjectivity to stress its social nature (Shay, 2005).

To conclude, my study explores the concept of connoisseurship in relation to the assessment of student artwork. My key argument is that group marking practices allow for the development of shared (but continually contested) reference frames which underpin a community of practice.

Arguably, a connoisseur approach to understanding assessment expertise can accommodate the complexity associated with assessing creative practice. In the words of one of my interviewees, when lecturers are assessing students' artwork they are looking for "that zing… what the hell would that be!"

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DAY 2

Strand C1: Creativity, performance and change

Strand C2: Feedback and assesssment

Strand C3: Structures and people

STRAND C1: INTRODUCTION: CREATIVITY, PERFORMANCE AND CHANGE

Paul Kleiman, PALATINE, the Subject Centre for Dance, Drama and Music

In the foreword to the UK Government's 2003 White Paper, *The Future of Higher Education*, Charles Clarke, the (then) Secretary of State for Education, envisaged a sector in which universities recognised their role in educating students "to live life to the full, through the acquisition of skills and through fostering imagination, creativity and contribution to society".

Since the mid-1990s, and driven by the economic imperative to foster creativity in business, creativity has emerged as a significant element in the education policy agenda in the UK. This significance has been recognised by policy-makers and researchers, and it has led to a growing interest in creativity in higher education and, in relation to the papers in this section, a recognition of the contribution art-based activities and approaches can make to enhance individual and collective creativity.

There is undoubtedly some increasing pressure on universities to produce graduates who are also creative thinkers and innovators, and academics and teachers retain a strong attachment to notions of creativity (Gioia, 1988, Jones, 2001, Jackson, 2006). However, there is a discernible gap between the rhetoric surrounding creativity and actual practice. A small but perhaps significant indicator of that gap appears in the White Paper (2003) itself where the word 'creativity' appears only three times - whereas the word 'skills' appears 78 times. Another, more recent and starker indication of that gap can be found in the major report *Prosperity for all in the global economy – world class skills*, written by Leitch (2006) for the UK Government, and which opens with *"our natural resource is our people – and their potential is both untapped and vast. Skills will unlock that potential"* (Leitch, 2006, p.1). The 154-page report does not contain a single instance of the word 'creativity' or 'creative'.

Responding to the Leitch Report, Brennan (in Cook, 2007) criticises it for its single focus on entry into the labour market and its lack of recognition of the sorts of skills and re-skilling that might be required over a course of a lifetime.

> *"People are going to need flexibility, creativity, the skills to adapt and change. The skills a person needs to go into work on a Monday morning, and the skills that they will still need in 20 years' time, are of a quite different order."* (Brennan in Cook, 2007).

Despite the evidence to the contrary, there are clear signs that creativity – as a key theme – is rising up the higher education agenda, its ascent accompanied by an increasing number of projects, conferences, papers, new journals, research fellowships and studentships. In Europe, the European University Association (EUA) launched a major project on 'Creativity in Higher Education' (2006) to investigate how universities can foster the development of an institutional culture of creativity. In the United States where, according to Tepper (2004), creativity *"has become the sine qua non of a successful America"*, the idea of developing the 'Creative Campus' and, in particular, using the arts as a primary lever of that development, has attracted attention from both educators, policy makers, researchers and some leading universities.

The arguments for promoting and enhancing creativity in higher education have not only grown stronger, but they can be seen and heard emanating from a number of different fields. As well as from education itself (Robinson, 2000, Jackson et al, 2006, Sternberg, 2007), influential arguments for creativity in higher education can be found in science (Bohm and Peat, 2000), economics (Florida, 2002), and business and technology (Pink, 2005). All the arguments are predicated on a vision of a present and future world in which the 'old' systems, relationships

and cycles of society, work, and production no longer pertain, and for which:

> *"The challenge for universities seeking to equip undergraduates to enter the creative workforce is to promote and support a culture of teaching and learning that parallels an unpredictable and irregular social and commercial world in which supply and demand is neither linear nor stable, and labour is shaped by complex patterns of anticipations, time and space."* (McWilliam, 2007)

The arguments at the 'macro-level' for enhancing creativity in education, appear to be both inexorable and undeniable. However the challenge for higher education institutions, faculties, departments and individuals to go beyond 'in principle' acceptance of the arguments, and to act to ensure that creativity – at the 'micro-level' of the relationships between and amongst the student, the course, the content, the learning environment, and the teacher – is intrinsically bound into the experience of learning and teaching.

Creativity, in the context of learning and teaching is essentially about conceptual and personal transformation (Kleiman, 2007), and the papers in this section explore creativity in the context of learning and teaching, with a particular focus on using pedagogic approaches that utilise and are informed by drama and performance-based methods. Eugene Dairiaathan explores the use of improvisation with non-music specialist teachers, and Ros Steen and Joyce Deans reflect on how interdisciplinary collaboration between voice and music teachers creates a deeper, more meaningful learning experience - both for students and teachers. Focusing on the design disciplines rather than the performance disciplines, Tugyan Aytaç-Dural explores the use of performative approaches to enhance the creativity of first-year design students.

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IMPROVISATION AS CULTURAL RECREATION: A PERSPECTIVE FROM NON-MUSIC SPECIALIST TEACHERS IN SINGAPORE

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Abstract:

This paper follows from my earlier study in a module (Dairianathan, 2003) of enabling through improvisation of the non-music specialist teacher who possesses little or no prior formal or certified musical training. During the module, one group comprising members of the Malay community, *drew on our Malay culture and tradition*. By studying their performance, journal entries and essays, I hope to contribute towards an understanding of improvisation from musical, institutional and socio-cultural perspectives.

Questions

- Can we gauge skills of musical improvisation only when we possess evidence of training or certification?
- If musical ability differs in different cultures, how does one gauge improvisational ability?
- If improvisational skills are applied to site-specific contexts, how does this site-specific tradition retain its identity?

Key words

Authenticity in improvisation, cultural recreation in improvisation, improvisation as reflective behaviour, improvisation as reflexive behaviour, melayuness in music and culture, musical ability in improvisation, non-specialist music teacher, ngawur in Javanese gamelan practice, teaching and learning of improvisation, wayang kulit and melayuness.

Contextualising improvisation

Although definitions of improvisation have become much broader and more sensitised to context, Nettl (1998, p.6) suggests that references to them remain largely *within* western art music traditions. Nettl believes this stems from attitudes towards societies in which improvisation is significant and whose arts may be appreciated but not taken seriously. Magrini (1998, p.169) explains the connotation that "what is improvised is to some extent unpredictable" and suggests two reasons an event is considered unpredictable: the "aleatory and unsystematic character of the event"; and a lack of knowledge and information for those who experience it. This latter suggestion may account for historical accounts in western art music theory and practice of improvisation within systems of regulation.

However, understanding improvisational ability in music poses epistemological challenges. For Blacking (1973, p.100), "when s/he improvises, s/he is expressing these systems in relation to the reactions s/he picks up from his/her audience". If "musical ability [is] a general characteristic of the human species…a cultural skill which embodies human thought and action" (Blacking 1995, p.236), then a consideration of improvisation is dependent on situating either observable processes or products of such human behaviour (Blacking 1995, pp224–5).

Moreover, an ability to improvise encompasses far more than knowledge and training in instrumental virtuosity and fidelity to conventions in performance. Sutton (1998, p.86) observes two examples in Javanese gamelan practices. One measure of a good musician is his/her ability to execute a quick recovery from lapses via improvisation. Another instance concerns a musician who is insufficiently familiar with the piece being played and attempts to 'fake' through without falling apart. Informed listeners consider this

ability 'undesirable' but acknowledge its occurrence as *ngawur*.

Improvisation, I argue, involves at least two dimensions. The first relates to skills developed and regulated in a context-dependent and practice-specific system. The second compels a culturally situated reading of improvisation based on Sutton's accounts of unpredictability of both event and human activity. The inclusion of reflexive behaviour in unpredictable situations within the scope of understanding improvisational skill raises issues of membership. Can we gauge skills of musical improvisation only when we possess evidence, via certification, of training? Or should these skills be recognisable even among those without the requisite musical training? Secondly, since musical ability differs in different cultures, how does one gauge improvisational ability? Thirdly, if improvisational skills are applied to site-specific contexts, how does this site-specific tradition retain its identity?

Primary accounts and commentary

This paper follows from my earlier study in a module (Dairianathan, 2003) of enabling through improvisation of the non-music specialist; defined here as one who possesses little or no prior formal or certified musical training. At the end of the module, participants had to put up a performance. One group comprising members of the Malay community *drew on our Malay culture and tradition*. Drawing on these and other details from their journal entries and essay questions, I hope to contribute towards an understanding of improvisation and what respondents themselves refer to as *cultural recreation*. I have obtained permission from these students to use reflections from their journal and essays for this purpose, of which, selected excerpts are given attention.

This focus group chose wayang *kulit* puppets, a gendang batangan (double-sided drum found in Javanese Gamelan ensembles), a *kompang* and smaller *kompang ceng-ceng* (Malay frame drums), whistling sounds, rainmaker, three single *Orff* pitches, E^4, A^4 and B^{b4} and an overhead projector. Instead of using established musical and theatrical practices of the genre, the 'puppets' were placed on an overhead transparency machine and projected onto a screen.

The musico-dramatic structure was built out of a simple storyline. Spoken narrative and sung parts were delivered in English. Musically, the three pitches are used as a motif throughout the piece perceptibly in 4/4 time where the pitch A is an anacrusis to the B^b which begins the loop [a |b^b–a–e–a| b^b...etc] within what is perceived as an A-B-A-D-A[1] structure. The vocal line elaborates on this three-note motif. A quicker B-section represents intensification of the narrative followed by a brief A reprise that leads into the D section which comprises interlocking rhythms found in kompang (frame drum) ensembles with vocal ululations. The initial three-pitch motive returns very briefly to close the entire piece.

The following extracts are drawn from their journal reflections in relation to this final performance:

"Wayang kulit not only depicts just the performances but more importantly it reflects the culture of a group of people who value its heritage. The performance [tells] a story about three characters, a hero, heroine and villain. The metallophones and the drums function as storytellers and provide a background to the performance. The rainmaker reflects the serenity and calmness of the river. This image is further enhanced by the sound of the metallophone (to the tune of the gamelan). The rhythmic beats of the drums were introduced to portray the hero and his heroine being happy and in love. Suspenseful type of rhythms indicated the presence of a villain and chaotic drumbeats accompanied by the faster rhythms of the metallophone accompany the images of a fight, with the hero conquering the villain. The music returns to [being] joyous and upbeat."

"The non-traditional metallophones evoked the kind of sounds one would get from a gamelan – we thought it was a good choice. Two other instruments we used were the kompang and gendang batangan. Since wayang kulit had been associated with Javanese court-culture, we decided to add ritualistic elements associated with it by opening with a traditional bow… we also wore batik sarongs and sat on a wooden platform while playing the musical instruments."

"As the person manipulating the shadow puppets, I held the greatest responsibility as narrator, performer and person providing directions and signals to [coordinate] my group. We used four

An ability to improvise encompasses far more than knowledge and training in instrumental virtuosity and fidelity to conventions in performance

repeated patterns before each transition and clearly projected the use of different structures. We improvised during the narration process and percussion section. The gendang batangan played a major role in our performance...also as a cue to move from one structure to the other. Through the gendang too, we tried to include some combinations with the kompang."

"We were able to attract the audience to participate and blend themselves with us – our mood was heightened. The class commented that the performance was entertaining. They were able to follow the story line and someone mentioned that he was enthralled by the gamelan music. Others liked our group's drawing on heritage. We replied it was better to draw on our strengths and to perform something that the members are more familiar and comfortable with. We were able to improvise with greater confidence because of our familiarity with our model. One of our course mates was disappointed that Kartini did not fully utilise the use of the puppets of the wayang kulit and sang in English. While the images could be considered central to a 'conventional' wayang kulit performance, we were looking more towards synergising all the themes that we had learned so far [in the module]. Our performance was very much based on our cultural experience and exposure more than anything else so, it may not have been as accurate [authentic]."

Reflections

The teaching and learning of improvisation for a non-music specialist teacher is not only dependent on identifying ways of enabling their experiences through musical improvisation but also what they bring to and contribute towards its understanding.

The respondents' writing and anecdotal evidence on improvisation reveals learning through active engagement in music-making activities. More than that, they also discovered cultural recreation in drawing on their cultural heritage as source of and resource for improvisation activities. Blacking's (1995, pp.148-150) studies of the connections between music-making and socio-cultural institutions over time indicate a tension between transformative and transgressive re-presentations of culture.

He argues that all 'ethnic' perceptions be taken seriously in defining the parameters of music in any theory of music-making. Therefore, special qualities assigned to music-making and musical experience makes its symbol systems sociologically and anthropologically problematic. But "while musical systems are related to social institutions, the relationship is dialectical, dynamic and highly problematic...over-reliance on musical evidence is ultimately misleading" (Blacking, cited in Byron 1995, pp.23-24).

But an over-reliance on extra-musical evidence is also equally misleading. The ability to express meanings through music is an inherent capacity and propensity. By suggesting that improvising is "shared in very different degrees in very different forms by all human beings", Ryle (1979, pp.121) argues that improvisation involves thinking. If improvisational behaviour in music by non-musicians is comparable in substance to that of trained musicians, I suggest this behaviour is rooted in ways of thinking: which is a fundamental human ability. Not surprisingly, Berliner (1994, p.241) refers to improvisation as "reworking precomposed material and designs in relation to unanticipated ideas conceived, shaped, and transformed under the special conditions of performance, thereby adding unique features to every creation".

One measure of a good musician is his/her ability to execute a quick recovery from lapses via improvisation

What lessons can we draw from a group of non-music specialist teachers who believed that they succeeded in making use of improvisation as a form of *cultural recreation?*" In putting up a performance, this group of non-music specialist teachers, in their words, *drew on our Malay culture and tradition*. What made this group refer to their cultural heritage? All respondents, who are from the Malay community in Singapore, drew on common heritage and the shared experiences as cultural source and resource. But Francis (2002, pp.46-57) informs us that the Malay community in Singapore acknowledges "Javanese, Batak, Boyanese, Bugis and Minang ancestry", among others… He continues: "*Melayu-ness* in Singapore… has generated, politically, a new urban Malay culture… adaptation of custom, dress, music, dance and dialect."

Francis' research into Melayu-ness in music and culture has revealed accounts of theory as diverse as accounts by the practitioners. These diverse forms of 'informal knowledge' of the practitioners actually give rise to a diversity of oral practices as well. Some of these practices, despite beliefs in a unitary Melayu-ness, could well be the result of assimilation of other practices. This is aptly the case in the focus group's choice of instruments in their *wayang kulit* performance when they chose Malay frame drums. Even the gendang batangan is used in Malay traditional musics. When these non-music specialist teachers were engaged in improvisation, it would seem doubly ironic that they could have drawn on Malay culture and tradition – as diverse in influences as in practices. Moreover, their choice of three Orff pitches in place of a Javanese gamelan or overhead projectors for a cloth-screen are 'improvisations' of resources in Javanese *wayang kulit* practice. How should we respond when they refer to their improvised performance as *cultural recreation*?

Given the propensity for assimilation and adaptation among the various communities

in the South-east Asian region, it is difficult to ascertain *Melayu-ness* through this focus group's performance and express association with *Javanese wayang kulit*. The respondents, however, suggest it is precisely because "improvisation exists in oral traditions" that *"the absence of notation drives oneself to experiment, adjust and improvise during a performance, which, is significant in the Malay traditional musical world"*. Therefore, the soundworlds projected by the respondents in their improvised performance, while challenging notions of authenticity of genre and musical form and style, were considered by their 'audience' to have involved Malay musical and cultural heritage. Responses to the charges of the use of English lyrics and that the puppets were not fully utilised were that "while the images could be considered central to a 'conventional' *wayang kulit* performance, we were looking more towards synergising all the themes that we had learned so far [in the module]".

What these non-music specialist teachers indicate in their processes of learning through improvising invites the following questions:

- Should we accept improvisatory practice, including *cultural recreation*, in an environment where inhabitants speak as 'themselves' in relation to their situatedness? Who or what are the voices they represent in their *cultural recreation*?
- Can we accept the intertextuality – fragments of sounds familiar in their environment – a tension between authentic realisation and the production of presence?
- How convicing is the argument, to paraphrase Jason Toynbee (2006, p.73), that in their cultural recreation, the various strategies and tactics of musical dialogism in the service of an assimilatory culture of Melayu-ness are spoken and spoken for through Melayu voices?

- Should we instead invest our concerns in the currency of authenticity in a good improvising musician, who as Neil Sorrell (1992, p.784) considers, "probably in any society, as one whose intuition, imagination and inspiration enable him or her to steer a course between… the obligatory and the forbidden?"

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CO-DIRECTION: HOW CREATIVITY IS TRANSLATED EDUCATIONALLY IN A MOMENT OF REHEARSAL

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Abstract

A distinctive practice of co-direction has been developed by Joyce Deans and Ros Steen at the Royal Scottish Academy of Music and Drama, rooted in their respective specialisms of movement and voice. In this paper they reflect on their innovative practice and show why they believe that co-direction offers a deeper learning experience for students, empowering them to creatively negotiate its challenges. Their approach provides a paradigm for the integration of disciplines within the acting process while challenging the traditional hierarchies of the rehearsal room by refusing production authority to any single voice.

Questions

- How do we do what we do in practice?
- How is enhanced learning evidenced in performance?
- Are there analogous practices in other disciplines that would help us move our own practice-based research forward?

Keywords

Actors, collaboration, creativity, innovation, Jacques Lecoq, movement, Nadine George, rehearsal, theatre, voice.

Introduction

A case study in innovative practice: co-direction as a methodology for integrating disciplines and enhancing learning in student actor training.

We are sitting on opposite sides of a circle. Rarely on the same side. We get up and move around, in tune with each other, influenced by where the other is. This is only partly because the play is being directed in the round. In the middle of us is an actor, her voice and body the locus of the rehearsal moment that is the subject of the dance, the conversation we are having. She is Ariel and she is moving in Hindu rhythms and speaking in a voice that is both male and female but when she stops her Scottish body and voice speak in the rhythms of her own land, of the rain.

There is a moment in the frenetic fifth act of *The Tempest* when Ariel and Prospero come together in a point of vibrated stillness. In a moment out of time, the spirit who has no feeling teaches the human being to feel in his soul:

> Ariel: Your charm so strongly works 'em
>   That if you now beheld them your affections
>   Would become tender.
> Prospero: Dost thou think so spirit?
> Ariel: Mine would sir, were I human.
> Prospero: And mine shall.[1]

This crucial creative moment is also the moment of education. Understanding and enlightenment is drawn out for each participant and flows, this way and that, in the tidal river that is rehearsal. As co-directors, with specialisms in voice and movement, we are teaching the actors the importance of the moment when Prospero becomes pupil, and the actors are

Describing a moment of creativity is like trying to hold a river in your hands

learning what needs to be transmitted physically and vocally between them. But as they bring their own instincts to bear on embodying that significance in action we are learning how best to use their decisions in performance. The reaction of one director to their playing teaches the other to read the action afresh, provoking a new proposition that renders the first director a learner again.

Describing a moment of creativity is like trying to hold a river in your hands: here we can only sample the water in cupped palms. Nonetheless, we hope to show why we believe that the creative act of co-direction, with its flowing together of voice, movement and text in the acting moment offers a deeper learning experience for our students.

Just as the action of Shakespeare's *Tempest* is triggered off by events that happened years earlier, so the working relationship between us is rooted in our individual and shared pasts.

Our creative practice reflects our respective training and professional experience with its fusion of a Lecoq-based physical approach and a vocal technique rooted in the work of Nadine George.[VI]

We both trained at the RSAMD before encountering the work that would change our lives.

In 1990, I met Nadine George of the Voice Studio. My training had been in that mainstream British tradition best exemplified by Cicely Berry who was a strong influence on me but it was George who opened up a deeper understanding of the nature of the voice and its direct channel into the heart of the acting process.[II] I first introduced this vocal technique into my professional theatre voice practice with David Harrower's *Knives and Hens* in 1995 at the Traverse Theatre in Edinburgh, where I became a collaborator in production and in 2000, I co-directed a production of *Solemn Mass for a Full Moon in Summer* at the Traverse and the Barbican Theatre, London, with Philip Howard.[III]

The inspiration for me to continue my training at Ecole Jacques Lecoq *in Paris was the experience of two very different pieces of theatre: Tadeusz Kantor's* Dead Class *and Steven Berkoff's* Fall of the House of Usher. *Both still resonate.*

I can still hear Kantor's soaring music and Berkoff's heartbeat, so loud the walls and floor shook, and the silence…

and within this, the extraordinary physicality of the actor's body and voice creating an utterly compelling imaginative and sensory experience.

We then worked together on various productions but always conventionally.[IV]

Only now can I see how utterly right it was that we set out on this journey.

In 1986 I directed Peter Barnes' Bewitched *with Ros as Voice Coach for the first time. The moment of change in our working relationship came in 2003 when Ros brought her innovative professional practice to bear on a student production.*

Following this experience we decided to co-direct.

We share two fundamental and unshakeable points of view about acting:

i) Who the actor is *as a person* is crucial to his/her acting. It is always about ourselves.

It is about that chemistry of these people, in this place and time, doing this. And out of that should grow something which is obviously about the play but also obviously about them too… The more the process is about the people who are creating it, the more exciting it becomes.[V]

ii) The primacy of the body and voice of the actor as the main locus of the rehearsal process.

But we are nonetheless very different people.

I am not unaware of the body in space but more finely attuned to how it vibrates and sounds than how it looks.

The reflective question, which we are still exploring is: can co-direction actively enhance the learning experience for the actor in training?

For me (for both of us) the rehearsal process always begins with the actor as an individual, in relation to the other actors in the rehearsal room, in relation to the text, in relation to the world at this moment in time. It can only ever be about these particular people at this particular time, in this specific space.

That's all there is. [Points to her whole self from her head to her feet]

I approach the work visually and spatially, Ros aurally and orally…

(Ros was attracted to Twelfth Night *because "it's all about music and song"; I saw it as triangular relationships realised concretely in the space…the music and the maths.)*

Sometimes the answers for the actors lie in our differences.

There are times when Ros will suggest a physical solution to an actor – Malvolio for example,[VII] while I

What teaching and learning is going on in the moment of rehearsal and how does the practice of co-direction enhance students' educational experience?

Our student-centred pedagogical approach focuses on progressively enabling students to learn, to take responsibility for that learning independently, and to reflect upon it. After two years of high-level acting, physical and vocal training, the students are ready to move to a fuller integration of voice, movement and acting in performance, the arena where their learning is challenged the most. Our collaborative rehearsal process draws on a wide variety of teaching strategies. First, further points of technique are revisited by the director/teachers on the spiral model, encouraging deep learning. Second, our co-directing approach itself is a paradigm for the integration of disciplines within the acting process:

[Ros] had already introduced us to the four energies of the voice in previous sessions…. however it was not until rehearsals started and we began to put these techniques into practice that I began to appreciate how the use of these energies….are essential to the actor's process of development of character….with Joyce's visual eye….examining the impulse behind each movement.[VIII]

This integration is facilitated by having two directors who can afford to give each actor 'twice the amount of time… to discuss, explore, support or challenge'.[IX] Third, two pairs of eyes and ears homing in on the same scene from different angles also opens up possibilities faster and further than one director and questions the notion of production authority, traditionally the preserve of the solo director, because

Just as pearls come from the irritation of grit in the shell, so the most creative work can result from risk-taking

it refuses to favour any single viewpoint. Everything is exposed to the cut and thrust of multiple perspectives which tests every possibility, every choice in the crucible of practical action before subjecting it to reflection and discussion in the complex, delicate negotiations inherent in the multiple discourses of rehearsal. Contradictions are brought into the open, even welcomed and allowed to co-exist until late on in the process when opening night speeds a final resolution. The process may, at times, become too challenging for some actors, who feel confusion when faced with no single, clear-cut source of authoritative decision-making

> One particular example was… over the meaning of a line – I think in an early speech by Caliban. […] Joyce and Ros didn't agree…; both thought the emphasis fell in different places. […] In this instance, someone – the director – has to make a stand and decide. But there was no director. There were two. […] It could be said that we were being treated as adults, and that any kind of 'not in front of the children' attitude was healthily abandoned. But it often became clear that Joyce and Ros's conflicts of opinion were not resolved.[x]

But just as pearls come from the irritation of grit in the shell, so the most creative work can result from risk-taking and in the final selection of choices that form the production lies a unique teaching and learning opportunity about the process of artistic decision-making and creative choice:

> The co-directed approach […] enabled me as an actor to develop a deeper understanding of Viola. The guidance of two different directors […] gave me confidence to take more risks with my acting.[xi]

How is student learning enabled? Learning is embodied as the body/voice becomes not only the

site of exploration and learning but also the means by which it is applied. At the same time, the students are invited to reflect on the insights gained, not just from one rehearsal moment to another but throughout the rehearsal and performance process as well as post-production, when sufficient time has elapsed for them to contextualise fully their experiences. Learning is further enabled by performing to a paying public (rather than an invited one) who subject the students' work to the keenest scrutiny and offer immediate feedback, judgement and evaluation. The *Sunday Herald* in its review of the production (18 June, 2006), praised "a powerhouse performance" which was "a bright, bold and clear advert for the possibilities of student theatre".

Co-direction develops students' notion of what an acting ensemble is – a company where the creativity of one, equal, sovereign and indissoluble from the others is the creativity of the whole with no-one's single viewpoint privileged more than any other. It deepens the integration between acting, movement and voice with text and performance and empowers performers by putting them in a different place from that of the traditional hierarchical rehearsal room. This other place is often uncomfortable and in order to negotiate it, the actors are required to be constantly engaged with its difficulties and thrown squarely on to their creative resources as the means of doing so.

And not just the actors. As directors, we too are in the same uncomfortable, unfamiliar place, living on our creative wits to research new ways of integrating our work.

As we watch Ariel, we are dancing to two different tunes simultaneously and holding two conversations at the same time. We are learning how it goes. She is learning what acting is.

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Footnotes

I   *The Tempest* (V, 1)

II.   The essence of George's work is the development of the four different qualities of voice, two male and two female, which, she claims, are in every human voice. These are first explored as sung notes, using the fixed intervals of the piano for guidance, and then as speech. The voice work focuses on enabling actors to enter the text and embody it, literally; that is, the whole text is vibrated through the body and voice of the actor in order for it to be transmitted to the body of the listener, in the moment of speaking. This vibration of the text in the body means that the text, rather than simply being understood intellectually or felt emotionally and then 'acted', is connected deeply to where the voice actually comes from: to the physical source of the creative energies and impulses of the actor.

III.   Philip Howard is Artistic Director of the Traverse Theatre (1996 – present). A description of the process is given in: Steen, R. (forthcoming), 'Seein Oursels As Ithers See Us', *Voice and Speech Review.*

IV.   Normally the role of the voice specialist is to assist in preparing actors' voices for the demands placed upon them (eg warm-ups); to troubleshoot difficulties or problems (eg audibility, clarity of text, shaping of speeches, vocal health issues); and to provide dialect or other specialist help. There can be a more developed role in terms of the voice specialist's ability, in Berry's words, "to listen and hear words with a heightened awareness of their underlying sound, rhythm, cadence and form, along with an ability to open this out physically and imaginatively and in this way allow it to inform meaning" (reference given by Cicely Berry for Ros Steen's application for an AHRB grant for research into the arts), but this is not always understood by directors and not always the main reason for engaging the voice person. The majority of these functions are generally conducted on an individual basis in consultation with the director through individual 'voice calls', while the director may be rehearsing elsewhere.

The enhanced role involves working, as part of the rehearsal process, on breath, energy, quality and texture of sound and the immediate release of these into text *as it is being rehearsed in the rehearsal space*. The text is then voice-directed in the presence of, and in conjunction with, the director.

V.   The director Garry Hynes, cited in Taking Stage, Manfull, H. (ed) (1999), Methuen, p.64.

VI.   For introductions to the work of Lecoq, see, for example: Lecoq, J. (1997), Le Corps poétique, Actes-sud, Arles; Lecoq, J. (2002), The Moving Body: Teaching Creative Drama, Methuen, London; Lecoq, J. (2006), Theatre of Movement and Gesture, Routledge, London.

VII.   The actor who played Malvolio was golfing and talking to himself in the 'letter' scene (The Tempest (II, 4)) and dancing in his kilt in the 'cross-garter'd' scene (The Tempest (III, 4)). Both sets of real, everyday physical actions released a fluent speaking of the text in his own Scots accent, which had up to that point been rather stilted.

VIII.   Personal correspondence from Belle Jones to Ros Steen and Joyce Deans based on the student's reflective diary (26/2/07)

IX.   Personal correspondence from Benedict Hitchins to Ros Steen and Joyce Deans based on the student's reflective diary (8/1/07).

X.   Personal correspondence from Benedict Hitchins to Ros Steen and Joyce Deans based on the student's reflective diary (8/1/07).

XI.   Personal correspondence from Kirsten Hazel Smith to Ros Steen and Joyce Deans, based on the student's reflective diary (22/07).

DRAMA, DESIGN AND CREATIVITY: 'CREATIVE DRAMA' FOR BEGINNERS IN DESIGN EDUCATION

Dr Tugyan Aytaç-Dural, Başkent University, Turkey

Dedicated to the memory of Hrant Dink

Abstract

This paper aims to discuss the potential of drama for introducing the fundamental concepts and principles of design and discusses a case study with students of interior architecture and environmental design. In order to upgrade creativity in design education, *drama* is proposed as a fertile ground, especially for beginners who are subject to a process of transformation, since it can easily be associated with the human being. The presentation includes visual documents, one of which being a film screening of the students' final products, and their immediate response to such an endeavour.

Questions

- What do you think about the significance of interdisciplinary links between different disciplines?
- Is it possible to consider the first year in design education as a period of transition/transformation?
- Do you agree that fundamental concepts and principles of design can be applicable to any other subject matter?

Keywords

Basic design, beginning design education, design education pedagogy, composition, creativity, interdisciplinary studies, order, organisation, unity.

All the world's a stage,
And all the men and women merely players:
They have their exits and their entrances;
And one man in his time plays many parts,
His acts being seven ages.

Prologue

When I quoted Shakespeare's famous line "All the world's a stage" as the first sentence of my PhD thesis years ago, I was hoping to find a suitable situation to put these words into practice. With a strong belief in the potential of theatre for introductory architectural design education, I have examined its different aspects from different viewpoints, one of which being the relation between 'drama and intelligence'. I drew confidence from reading in Courtney's *Drama and Intelligence:* "Good teachers discovered that learners responded quickly and in depth through free dramatisation" (Courtney 1990). However, it would be some time before I had the opportunity to really test out my hypothesis. When I started work at Başkent University after leaving METU, I was pleased to discover that 'Creative Drama' was already a course in the curriculum for first-year students of the Department of Interior Design. As my new role was as the co-ordinator of the first-year design studio, I seized the chance to get involved.

When I first met Tamer Levent, who was conducting the Creative Drama Course, and asked for his collaboration I received a warm welcome and started to attend his courses. Fortuitously, the students were supposed to study Shakespeare's *As You Like It*, focusing on Jacques' tirade: "All the world's a stage…".

This paper aims to discuss the contribution 'drama' can make to design education for beginners, discuss the different stages of our practice and comparatively illustrate/screen the end products.

Creativity: *fantasy, imagination and upgraded reality*

Education as the essential issue for human endeavour should be subject to close examination at every stage; the periods of transition however necessitate an extra concern. The first year at university - in other words the initial stage of professional education can be considered to be one of the most significant 'periods of transition', especially for the professions that are assumed to require 'creativity'.

It is easy to claim that it is impossible to define creativity adequately - due to the variety of its aspects, which are distinct and equally important. Besides there is a tendency to associate creativity with an innate exceptional talent that is only possessed by a minority of gifted people, hence cannot be taught. On the other hand, it is also a widely accepted belief that different fields benefit from different aspects of creativity, so that it is important to find out the exact correspondence and develop the method of education accordingly.

Antoniades argues that:

"Without an understanding of the relationships between the concepts of 'real' and 'unreal', 'imagination' and 'fantasy', it is not possible to have a clear understanding of the prerequisites for the creative process, or to embark on the task of cultivating and developing them." (Antoniades, 1990).

He makes his arguments perfectly clear by defining 'fantasy' and 'imagination' as "the ability of a person to generate images that cannot become reality" and "the ability of the mind to see what is there" (ibid), respectively. By means of our imagination it is possible to perceive the reality, to re-create and repeat it. This may not give new birth to what is already there; however when imagination is fertilised by fantasy, a new "upgraded reality" can be created (ibid).

One can perfectly benefit from these definitions while structuring a course, and 'drama in design education' can easily be considered as a fantasy to fertilise the image of a foundation design studio. In this respect, the existing image appears as the reality, and it becomes important to grasp the essence of this reality during the process of upgrading.

A period of transition: from self-centred child to self-esteemed individual

The first year at university is of utmost importance as a period of transition in general. These young people, first of all, encounter a number of social, emotional and even physical changes. They are about to leave their adolescent years and move into adulthood. Secondly they are expected to change their mental structure parallel to the shift in the learning system: from learning through ready information to learning through inquiry and discovery. And finally, this is a period during which the habit of achieving a temporary accumulation of knowledge should leave its place to the will for establishing the strong foundation for a lifelong future occupation, therefore a change is needed in the process of understanding.

Design education on the other hand demands an extra effort to overcome these changes due to the specific properties of the design act. Students who have been 'passive listeners' with absolute obedience to authority for years are expected to be 'active participants', to work on their own, take risks and get used to 'multi-dimensional problems' as opposed to 'multiple-choice tests'. By the end of the first year, the transformation of a 'self-centred child' into a 'self-esteemed individual' has to be accomplished, hence the instructor should be well aware of what this group of young people s/he is addressing are going through, and develop her/his teaching method accordingly.

The 'Basic Design Course', in terms of its content, can briefly be defined as an introduction to design language, and the alphabet of this totally new language is full of concepts. These concepts are worked out by means of exercises during which the students study specific concept by making two or three-dimensional compositions. This is a process of 'learning by doing' and the students are expected to relate the abstract words to their concrete products. However since they had been asked to memorise things without questioning until then, this relationship can be hard to establish. The students may start by copying existing examples instead of imagining a product that may better represent the concept. This is contrary to the spirit of design; but on the other hand, if they are not sufficiently stimulated, the students naturally tend to repeat anything they see around them without comprehending the essential properties. So we may refer to Antoniades once more and propose

FIG. 1

'drama' as the fantasy to fertilise the imagination of the young people who are unable to visualise the abstract concepts without seeing concrete examples.

Drama as an agent for fertilisation

One of the most important objectives of design education is to teach students the concept of unity and the conditions that facilitate achieving it. All those conditions, which are held to be 'the fundamental principles of design', when introduced at the very beginning with multiple references aid the students learning process.

Drama can be a medium to animate any design concept in front of the students' eyes. On looking at the configuration of the players on the stage one can conceive what is meant by contrast, rhythm or any design principle employed to achieve unity

and may reflect this experience in a work produced by using simple geometric elements or may even be applied while organising the spaces. This can also be achieved by the use of any other medium; a photograph or a sculpture may perform the same function. What is specific about drama is that the body, mind and soul are used simultaneously. In drama the elements of a composition are the human beings - they all feel and think.

> *"Our creative imagination and dramatic actions are experienced as a whole, and together they create meaning. They bring about the 'as if' world of possibility (the fictional), which works in parallel with the actual world and is a cognitive tool for understanding it."* (Courtney, 1990).

By the end of the first year, the transformation of a 'self-centred child' into a 'self-esteemed individual' has to be accomplished

FIG. 2

FIG. 3

So the Creative Drama course provides the opportunity for a new type of awareness, which transforms the self-centred child into a self-esteemed individual who is sensitive towards the environment as well. When a student is asked to act as if s/he is somebody else s/he starts to realise the different dimensions of her/himself as an element of a huge composition. Along with discovering the self, s/he recognises 'the other' with different properties and this results in an upgraded awareness, which further clarifies the concept of relation. Achieving unity by means of a series of relations between the inanimate elements of a design environment can thus be studied with reference to the animate elements of drama.

Design + drama = "All the world's a stage"

In Jacques' well-known tirade, Shakespeare describes the life of a human being in seven stages. Each stage is interpreted with reference to its specific properties and in relation to the whole - thus the unity is achieved by

means of different types of relations. The students were asked to analyse the tirade and prepare a performance as groups for the Creative Drama course (Fig. 1). And they were asked to represent their analysis on paper for the Basic Design as the initial stage of their final assignment. While preparing their performances they were critiqued both from the dramatic point of view and with reference to how well they seemed to understand the fundamental principles of design. On the other hand, the students composed the initial analysis sheet from photographs apt to each stage mentioned in the tirade. These photographs were supported by adjectives that would best explain the stages, and different types of surface textures complementing the selected adjectives were employed to define the properties of the elements, which were translated from the tirade, to make a composition representing the tirade in a two-dimensional medium. After studying the properties of the elements that would constitute the composition, the students focused on the relation between them and created a diagram representing the network of relations (Fig. 2).

'Types of organisation' is one of the essential topics of the basic design education. With the incorporation of drama it turned out to be an opportunity to demonstrate this subject in a different medium. The tirade itself grows along a line, hence can simply be stated as an example of 'linear organisation', which may mean 'putting the elements one after the other'. However the specific properties of these elements and the relation between any two or three of them makes

There is a tendency to associate creativity with an innate exceptional talent that is only possessed by a minority of gifted people, hence cannot be taught

the subject more complicated. As in the case of the poem, where lines come one after the other, the bodies may be arranged on stage standing as such, and this frozen image of seven bodies, each of which represents a stage mentioned in the tirade may simply show what a linear organisation can be.

Using the 'inner drama' of a human being rather than using only the body as a solid object may cast light on what we mean by different types of relations. We may look at the frozen composition of seven bodies standing on a line. Standing side by side is one type of relation that defines the position of the elements. When the cold bodies are replaced with real human beings other type of relations start to come into the scene with the help of personal feelings and thoughts (the inner drama). Two students staring into each others' eyes with love or hate tell more about the diversity of the relations than two bodies standing just side by side. And the same student as an element of composition who, while staring into the eyes of one person, holds the hand of another demonstrates the possibility of achieving a coherent whole despite changing conditions.

By means of such an experience the students start to realise the properties of the design elements by testing on their own. The images they have been looking for are provided without showing the 'correct answer' thus they start to be able to conceive the essence of all those 'invisible' concepts.

The final requirement for the Basic Design course was the production of a three-dimensional model (Fig. 3), which would stand for the intersection of three lives narrated by Shakespeare. Students were asked to represent the stages of life by volumes with different properties and make a three-dimensional volumetric organisation. In addition to the relation between different stages of life, the relation between the same stages of different lives was analysed, hence the concept of hierarchy was worked out with reference to the dramatic experience. The order of these live relations was than transferred into the inanimate medium.

The case study that I have touched on here should be considered as a rehearsal for structuring basic design education from a new perspective. The objectives of both courses will be further studied and the method will be reviewed to see how it can be applied in future. During the session we aim to discuss the process within a wider perspective that will provide extra feedback for the development of a new method. The results of our student feedback questionniare – aiming to understand the students' response to this way of teaching - will be presented at the ELIA conference.

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STRAND C2: INTRODUCTION: ASSESSMENT AND FEEDBACK

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The papers in this section explore issues broadly relating to the themes of assessment and feedback in higher education, with particular reference to studio-based art and design programmes.

Last year, in the UK, the Quality Assurance Agency for Higher Education (QAA) published the second edition of its *Code of practice for the assurance of academic quality and standards in higher education: assessment of students.* The publication defines assessment as "any processes that appraise the individuals' knowledge, understanding, abilities and skills" (QAA, 2006). These processes, according to the code, serve several purposes: promoting student learning, evaluating student knowledge, "providing a mark or grade that enables a student's performance to be established", and making available a means by which the public (including higher education institutions and employers) can ascertain the level of a student's performance.

The role that formative assessment plays in contributing to student learning is emphasised: "students benefit from feedback… at a time when they will be able to use it… for example, during a module rather than at the end". The way that "reflective practice by students sometimes contributes to formative assessment" is also acknowledged (QAA, 2006).

The role and provision of formative assessment in art and design higher education provides the central focus for these papers. This type of assessment "has been recognised by most art and design educators" as "particularly constructive" (Cunliffe, 2007) and is often considered a strength of art and design programmes. Walker and Barfield have referred to specific aspects of studio-based learning that facilitate formative assessment. For example, the structure of project-based learning "provides many opportunities for formal and informal formative assessment", and the learning environment itself is "highly conducive

to academic and social exchange and provides for constant informal assessment and opportunities for formative peer learning and self-reflection" (Walker and Barfield, 2006).

However, the effectiveness of some established methods used to promote opportunities for students to learn from peer and tutor formative feedback has been questioned. For example, research into students' perceptions of the functions and outcomes of the studio crit has suggested that anxieties relating to this process inhibit learning: "The students' perception of their role on the crit together with their perception of self can distract the student from the task in hand and block any learning experience." (Blair, 2007).

Speaking more generally about art and design education, Cunliffe (2007) suggests that the least-considered purpose of assessment is its role in "enabling students to learn how to regulate their own learning". Blair's research supports this view suggesting that: "Students at all levels, but particularly at level 1, seemed to be heavily reliant on a trust in their tutor's tacit knowledge above any self-evaluation or peer feedback."

The following trigger papers adopt a range of approaches in seeking to analyse and assess the ways in which assessment and feedback strategies impact on development of student (centred) learning and the promotion of creativity, experimentation and independence. Each poses questions about common practice in art and design higher education in pursuit of enhancement of the provision of formative feedback – be it provided through a process of self-reflection or peer and tutor responses.

Joanna Crotch and Simon Chadwick present their analysis of "The Review" in architectural education. Close observation and documentation of student and staff behaviours and perceptions have resulted in a range of strategies designed to improve students'

The role and provision of formative assessment in art and design higher education provides the central focus for these papers

participation and engagement in, and learning from, this "traditional" educational model.

Caroline Cash continues this investigation into students' experiences of verbal formative feedback in studio-based arts practices. Her paper reports on an analysis focusing on the development of students' critical awareness, this time in the context of a Graphic Design programme.

Dina Zoe Belluigi considers how evaluation of teaching practice and assessment of student learning can be achieved through adaptation of the student feedback questionnaire. Providing support from current pedagogic theory, she demonstrates how questionnaires can - and from an ethical perspective, should - be used as context-specific educational tools, particularly in order to encourage and promote students' self-reflection.

John Danvers challenges the prioritisation of numerical, quantitative, summative measurements of achievement over the types of formative, qualitative assessment, predominant in art and design, and explored in the previous papers. Danvers continues the theme of "student-centred learning", highlighting a tension between this "educational rhetoric" and the tutor's final application of a numerical score or grade to learner achievement. Danvers finds support from a broad range of cultural theorists for emphasising the provisional and contingent nature of assessments in arts education.

All of the papers analyse aspects of established practice in assessment and feedback and each applies creativity to the task of developing adapted or alternative models that respond to new technological possibilities, a changing student body, and shifting pedagogic and broader cultural perspectives.

All emphasise the complexity of providing that final "mark or grade that enables a student's performance to be established" and explore how

sensitivity to the context in which judgments are formulated, presented and interpreted can promote student learning and foster creativity.

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CRITICAL REVIEW: WORKING TOWARDS A MODERN REVIEW MODEL

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Abstract

The Review, as a learning and teaching tool, is a fundamental component of architectural education yet the 'traditional review' model currently practised is flawed. The perception, and often the reality, is one of conflict - where students can feel intimidated, demoralised and humiliated, and attendance and student participation can be poor. However the potential for learning and teaching through the review, and its importance in architectural education, offering dialogue and analysis is invaluable. We aim to identify the main problems, and then to design educational models for various review situations that will provide an environment where effective learning and positive teaching can occur.

Questions

- Do we agree that there is a place for the Review in current learning and teaching practice?
- How can we realign and modernise the Review as a learning and teaching tool so that it sits comfortably with evolving architectural pedagogic practice, and effectively deals with issues of technology and large student numbers?
- How can remodelled Reviews - that are designed to suit specific occasions - deliver efficient teaching and effective learning?

Keywords

Crit, improved learning environment, jury, review.

Introduction

The starting point of our research is that the Review, as a learning and teaching tool, is a fundamental component of architectural education. We also recognise that the 'traditional review' model currently practised within our school is flawed.

As relatively new teachers within an established school we, by default, have tended to accept current teaching practices, and presume them to be tried, tested and successful teaching methods. The Review is one teaching activity that appears to cause much anxiety and distress, and can, at its worst, result in conflict and humiliation for the students involved. We were aware that current practice was not producing the desired debate, discussion and subsequent learning that is generally assumed to take place at these sessions. Our proposal was to firstly observe, document and analyse current practice, and establish if our perceptions were correct. Based on analysis of our findings, our aim was to design a modern review model that eliminated the confrontation and negativity, and would create a fair and positive environment where effective teaching and good learning could take place. We also considered how this modernised tool could adapt to the growing use of technology within architectural education and the increasing pressures of large student numbers.

Traditionally the 'review' or 'crit' has been the main vehicle for students to present their work. It is the forum in which we, students and teachers, experience the architecture presented to us. Unlike most other design disciplines we do not experience the 'actual' – a student of architecture cannot take us around their building in the same way as a sculpture student can allow us to touch and view their work, or a painter can hang their finished piece before us. The architectural student has to use other means to represent their proposal. Even today, with the development of advanced computer generated images and 'fly through', we do not get close to the less tangible qualities that the student may be investigating. This 'virtual visit' has to take place at the review – where all means are used to convey the proposals – drawings, models, computer visualisations

and the spoken word, so the reviewers can fully understand, appreciate and discuss the proposal being made.

Our first step was to audit the current practice. This involved observing, recording, filming and documenting reviews across Stages One to Five. We needed to evidence our perceptions and assess whether they were local to the undergraduate course or occurring across the department. We also endeavoured to observe reviews in other departments in the GSA, and in other schools of architecture. The perception was that reviews in architecture were confrontational and ruthless. This opinion was backed up by the Head of Student Support, at Glasgow School of Art, who commented on the notoriety of reviews within the School of Architecture.

The Mackintosh School of Architecture's Student Handbook states that the review is the forum in which students "present, explain and justify their design project to a panel of tutors, and to their colleagues, all of whom participate in discussion and critical appraisal of the project" and goes on to state that "the review is considered essential to the learning process". This statement would appear to suggest that the review is a good educational model and implies a participatory and discursive event involving both staff and students; and in theory it is. Unfortunately the reality is somewhat different. Alongside the observational documentation, we carried out a survey amongst the third-year students to try and collect concrete evidence on the students' perception of the event. The questions were formulated to substantiate behavioural patterns observed in our audit.

If the review was to fulfil the learning and teaching aims, students would have to attend and participate. Poor and patchy attendance had been observed, and when students were questioned regarding this, responses were consistent across the survey: words such as 'boring', 'repetitive' and 'badly managed' were used over again. Other comments related to how exhausted the students were; the poor physical environment in which reviews were constructed; the lengthy nature of the event and the adversarial tone

at the review. When questioned about participation and why students withdrew from engaging in discussion - a fundamental principle relating to the quality and degree of learning - the students were protective of one another: "you have to work in the studio with each other", "they are your friends". It would appear that students can not disengage with their work sufficiently to accept critique positively. Others commented that they felt the tutors tended to talk too much and not listen, and did not value their comments. They also stated that they were not sufficiently knowledgeable about each others' work to make any positive contribution.

Suggestions for improving the discursive element of the review threw up many positive ideas such as peer reviews, students doing 'client role play' and more guest reviewers – particularly students from the upper years, as this was perceived to create a less intimidating environment with positive encouragement for student involvement. Other comments relating to misconceptions about assessment were common (no assessments are carried out at reviews, a fact that is constantly reiterated to students). Together with issues of poor timetabling, monologues by dominant tutors and unsuitable physical environment this meant we really had our work cut out!

Following collation and analysis of our observations we realised that one review model was not going to cure all ills – several models designed to suit particular situations were going to be required. The other key factor was to get all staff 'on board'. Recognising this we held staff sessions to firstly highlight our findings, and secondly to gather suggestions on how we may tackle some of the issues. Bad management, lack of planning and intimidating body and verbal language were all contributory in the flawed review. Some staff were complacent making comments such as "it's what we went through… it didn't do us any harm" and felt that the adversarial nature of the crit prepared the student for the real world. Staff information, workshops and training are ongoing and regardless of what models we come up with, if staff are unprepared to implement them it becomes very difficult to create a new review culture across the department.

Fortunately the students have been more

Traditionally the 'review' or 'crit' has been the main vehicle for students to present their work

The Review, as a learning and teaching tool, is a fundamental component of architectural education

receptive. Unhappy with the 'status quo', they appear keen to invest energy in some new initiatives. Using a test bed of 2nd and 3rd year students, with a staff team prepared to develop the review, we began trialling different strategies. On first reading these may appear simple, and could merely be classed as good management of the event. But with their introduction we observed a positive shift in the attitude of the student group to the possibilities and the learning opportunities of the review.

The issues:
- Exhausted students; poorly briefed and unchaired review panels.
- Poor physical environment preventing students being clearly heard and their work clearly seen.
- 'The wall' – the physical barrier created by a line of tutors at the front of the presentation.
- Poor timetabling: patchy attendance; minimal contributions from the student cohort.
- Heightened tension amongst students who believe that they, and their work are being assessed.
- Inadequate feedback to students

The interventions:
- Night before submissions/pin-ups, have resulted in almost a full turnout at the review session.
- Locating reviews in more comfortable and conducive environments has supported improved attendance. Unfortunately with large student groups, minimal budgets and poor resources available, this strategy has been more difficult to apply than others, but students have taken ownership of the spaces available and do their best to remove the detritus that gathers in these areas.

- Tutors sitting amongst the students thus allowing all to have a clear view of the work, with staff giving positive encouragement to students to participate.
- Clear timetabling with prompt commencement of the sessions, and good time management, resulting in fair time allocation across the student body. Punctual completion of the reviews has also contributed to sustained improvement in attendance.
- Peer reviews have been scheduled to precede the final reviews. These events have allowed students to become more familiar with each others' work, and discussions started at peer reviews have continued and developed during the final review. The success of these sessions relies on continuity of groups from review to review and well-structured timetabling.
- Reviews chaired by a proposed chairperson from the student cohort.
- Creating the 'event' – programme summation, aural feedback and a party to conclude the session.
- Well-briefed staff, visitors and students
- Written feedback by staff and allocated students.

The implementation of these strategies has shown positive results. The students have been very responsive, particularly in respect of the peer review sessions, where there has been positive feedback: 'boring' and 'repetitive' have been replaced with 'great fun', 'really enjoyable' and 'very helpful'. There has also been a marked difference in student participation within the peer group at the main review, as some students are gaining confidence with regard to critiquing each other's work. Currently this participatory improvement has been mixed, with some students feeling more confident than others about

asking questions and making observations. We hope that with continued use of the peer review, together with positive encouragement to participate from staff, all students will begin to take ownership of the event, and responsibility for their learning. Written feedback by staff has been supplemented by feedback compiled by students, this is intended to help the students focus on items listed on the prepared feedback sheet, and encourage them to question and comment, guided by headings on the sheets provided. It is hoped that these sessions will also aid the student in the development of their critical analysis skills.

From the students' point of view, their status within the review has been improved. Over the period of one full academic year, we have attempted to channel and direct these positive outcomes as learning opportunities, around which a design programme may be tailored. The students have been responsive with regard to taking ownership of their review, recognising that they have a stake. This has encouraged them to strive to present their best work in a non-pressured way and allowed them the opportunity to engage with the themes of the design brief, and the proposals of their colleagues on the programme.

We will continue to engineer the review, applying strategies as appropriate and designing the event to align with the required outcomes of each programme. Further testing, observation and questioning of those involved will be crucial to the continued improvement of these events. As previously stated, we have designed several models for the review to complement specific elements of the course programme. Peer review is becoming increasingly useful in the 3rd year, and with their introduction to the 2nd-year studio, it is hoped that they will begin to assist students to develop confidence, so that a relaxed discursive atmosphere may develop.

The 'speed review' is fast and pacy and useful at the beginning of a project where some students may be finding it difficult to get started. Here two tutors present the students' work, the idea being to enliven a debate on design issues and target specific design elements. The 'event review' occurs as the 'grand finale' to the programme where critics are invited and a special space selected, here the programme is concluded and it gives an opportunity for themes of the term to be drawn together and focuses the year group towards learning outcomes and objectives.

Trials continue to be implemented. We hope that enhancement of the intellectual discourse between students and staff will continue to develop, and the subtle shift of ownership of the review will continue giving the students confidence to engage with positive teaching and benefit from effective learning.

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TALKBACK: THE STUDENT EXPERIENCE OF LEARNING THROUGH VERBAL FEEDBACK IN THE STUDIO

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Abstract

Studio-based formative assessment has been the traditional learning activity in arts institutions and is part of the tradition of the developing practitioner identity (Blair, 2006). This paper reports on a case study within a larger ongoing project which is investigating students' experiences of visual assessment and verbal feedback. The case study explores how critical awareness is developed in a studio-based learning community and relates this to Daloz' model of challenge and support. The investigation observes students from BA Hons Graphic Design at University College Falmouth in a 'learning group' session and follows up the experience through subsequent discussion and interviews in order to establish a case study perspective and test generalisability through the experiences and perceptions of other courses in the wider project.

Questions

- How do you respond to students' request for formative assessment that supports and challenges?
- How do you create communities of practice to support a transformative model of learning?
- Is the critical language of visual assessment/verbal feedback accessible in different contexts to all learners?

Key words:

Assessment, challenge, formative, graphic design, mentor, practice, studio-based, support, transformative, visual.

> *"Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly." (Wenger, 1998).*

Rationale and context

The art, design and media sector, in response to a National Student Survey (HEFCE, 2006), has identified feedback on assessment as a particular issue. Countering the NSS findings it has been suggested that students' perception of assessment may be distorted by students not recognising the studio 'crit' as a form of feedback. This misunderstanding may lead to consequences of lost opportunities for students' learning development. Much existing research and literature points to the notion that assessment is the most powerful incentive for learning (Brown 2004). Research also points to the idea that comprehensive, timely and individualised feedback is the key to advancing learning (Nicol and Macfarlane-Dick, 2004). A significant amount of formative assessment in art, design and media is based around practical tasks in studio-based work. These formative tasks include some aspects of visual or oral presentation from individual students or in groups and instant verbal feedback from peers and tutors.

This paper reports on a piece of small-scale, institutionally focused research which began as part of a project funded through the *LearnHigher* Centre for Excellence in Teaching and Learning (CETL). The original aim was to collect suitable material to address the shortage of effective support for students and staff engaged in visual assessment, and produce a range of interactive examples of good practice. This work continues separately (Ridley, Cohen et al, 2007) but the project generated a range of fascinating insights into the way undergraduate learners in art and design receive and interpret verbal feedback. The Learning and Teaching Research Centre at University College Falmouth extended support to enable the data collected to be analysed and theorised around

It has been suggested that students' perception of assessment may be distorted by students not recognising the studio 'crit' as a form of feedback

how students perceive formative feedback as being relevant and developmental to both their short-term learning needs and to their future career directions. We set this in the context of Daloz' pedagogical model of transformative learning (Daloz, 1986) and seek to explore how students develop critical awareness of their own and others' work and relate this to their future learning and possible career directions - using feedback to feed forward (Torrance, 1993).

Our key question informing the research is: how do students respond to verbal feedback in studio-based learning? While the original funded project deliberately engaged with a wide range of practices and discourses, for this paper we have opted to draw on an example from a single and distinctive curriculum area, BA Graphic Design. This enables us to argue from a case-study perspective, and test generalisability through the experiences and perceptions of others.

Theoretical framework

If one of the goals of higher education is to enable students to become autonomous independent learners so that reflection on learning becomes more important than a teacher providing instruction (Stefani, Clarke et al, 2000), the studio-based assessment in the context of art education offers a well-established context in which learners can engage one-to-one with a tutor, and reflect on verbal feedback. We became increasingly interested in the question: how effectively do students learn in this setting? This paper tentatively seeks to theorise a model for studio learning, in which a case study drawn from BA Graphic Design is analysed through a framework drawn from mentor/novice learning in Teacher Education.

We chose to analyse student/tutor interaction during the studio activities through a theoretical tool drawn from the learning opportunity provided in mentor/student feedback. This two-dimensional model of learning relationships (Eliott and Calderhead, 1995) posits "support" and "challenge" as key elements for successful learning from a more knowledgeable other (Wenger, 1998; Wenger, McDermott et al, 2002). Studio-based learning offers an interesting parallel to the mentor/trainee relationship, since the latter requires purposeful talk, geared towards individual needs, incorporating a vision of where the student is going (Daloz, 1986). This suggests a fruitful approach to understanding learning through verbal feedback might investigate the direction and structure provided by the tutor, and to evaluate the extent to which non-confrontational challenge offers alternative approaches and prompts students to think afresh.

The ideal studio-learning experience would be one in which both support and challenge are high, enabling a novice to grow through the development of new knowledge and self-image. Should the studio event be supportive but with little or no challenge, the student is confirmed in their existing development, but has no extrinsic incentive to develop further. Should the studio-based dialogue exhibit high challenge but no support, the student could be likely to 'withdraw' from the relationship and to experience no growth. Should there be an absence of both support and challenge during formative assessment, there will be no encouragement for the learner to reflect, and no learning will occur.

The tutor has the opportunity to affirm and inspire a systematic and purposeful development of the students' work. The tutor is also in a position to make connections, facilitate experimentation and challenge to bring about change in the student (adapted from Kolb, 1984). This does not "just happen", since to be an effective element in learning, the studio

environment requires trust, discretion, confidentiality, rapport and support, to enable rigorous challenge to prompt learning rather than withdrawal. Therefore, we seek to understand the use of close, sensitive, attentive dialogue (Tomlinson, 1995, Portner, 1998) by tutors in the studio context, and to observe whether they employ diligence rather than domination (Haggarty, 1995)

Methodology

During the course of this single case study, which forms part of the larger project, four undergraduate students have been recorded taking part in a level 3 Graphic Design learning team. These students have contributed to discussion and interviews following recording of a learning-team formative assessment. The process of data collection has taken place during the second and third term of the academic year (January onwards). The students who contributed to discussion groups did so voluntarily and there has been no subsequent contact by the research team with students who did not wish to attend the discussion groups. This may affect the data, as it is the student whose visual assessment experience has been positive who is more likely to engage in discussion. Initially a thematic review of the data has been carried out with some additional follow-up interviews with students.

In order to create video of an adequate standard to be of use in subsequent learner development resources, the team included a project researcher with a background in broadcasting and a student assistant, as well as the Media Centre for technical expertise and resources. This meant that in some sessions there would be two or three additional people present in the room plus all the necessary recording equipment. It is clear from some of the focus-group feedback that students were conscious of delivering to us as well as to their assessors, and in some cases were not sure "what you guys wanted", despite advance briefing and reassurance. Despite our best efforts not to 'stage' events, it was evident

that our presence initially had some inhibiting effect, though this was less noticeable in larger group sessions and in third-year presentations. This led to some debate about the ethical considerations of authenticity and reactivity. All participants in the research were informed of the purpose in advance and signed both research consent forms and image release forms to cover both their participation in the research and subsequent educational use of the video data. In addition all raw data was duplicated for the course tutor to share with participants and use as an additional feedback resource. It was this sharing of the raw data with all the participants that proved to be a great incentive for courses and students to take part in the research. Many subsequent comments to the research team have indicated how helpful it was for students to review their presentation performance and use this to prepare for subsequent events.

Summary findings
Criteria

There is some variability in how students understand and interpret the criteria when presenting their work in a visual form, especially if this was done through more formal presentations rather than in tutorial or studio sessions. Students in some courses were unsure as to what extent they were being assessed for their presentation skills in addition to their 'product'. There was, however, a noticeable shift from level 1 students comparing their performance to others in the group in a normative manner, to level 3 students who were more focused on achieving what was required of the brief and criterion referencing their work.

> "Understanding of the process as well. Where you started and where you finish."

Professionalisation

Students interviewed appreciated the relevance of work-related assignments through 'live brief', real-world scenarios and the involvement of visiting industry or practitioner representatives. They also felt that there should be a progression in the challenge

Tutor questioning and probing is essential in order to extend the challenge of articulating and explaining ideas

of presenting their work to others –towards having to present to prospective clients, agents and employers. Although the settings were often informal and relaxed, students felt that sometimes the environment was not conducive to giving a professional presentation (eg noisy studio settings), but realised that good presentation skills needed to be underpinned by subject content and knowledge.

"You are establishing a presence against people in the career of design that may look at hiring students – competition results and things like that."

Peer feedback

Peer feedback is actively encouraged in BA Graphic Design. It was noticeable in the level 1 sessions that feedback tended to be overly positive and students were chary of being critical. However by level 3 there appears a more critical and direct approach to peer feedback. Students were also articulate about what they consider makes a good presentation as well as giving their opinions on the content or process of the product, design or artifact.

"You think of it as constructive criticism… you'd rather hear that than 'it's really nice'."

Critical thinking and speaking

Students valued the opportunities to articulate their ideas, processes and rationale for designs and although it was a nerve-wracking process to begin with ("it's like you put yourself on the table"), it soon became commonplace. Tutor questioning and probing is essential in order to extend the challenge of articulating and explaining ideas. In one instance, when a student was reluctant to expand on her ideas the tutor links the ability to articulate to professionalism and the need to be able to verbally present ideas to clients.

"That's what you do when you go out into industry, you have to explain your work to others, so it's good practice."

Feedback interaction

Inevitably one of the most difficult aspects of visual assessment/verbal feedback is a parity of interaction across the group. This is inevitably more difficult in large groups than small, but in all the events recorded there is a significant difference in amount of interaction and feedback given to individuals and groups within the session. Even when time limits are stated at the outset of the session there was no evidence that the allocated times were being met. Students themselves were aware of the limiting factors that tutors may face in giving feedback in large groups and made some suggestions how this may be addressed through being given copies of tutors' feedback notes, or through discussion in tutorials.

"It's competitive if you are doing the same projects… if there are ten in one learning team you get less time for feedback."

Transformative feedback

Students value immediate feedback, particularly feedback to which they can respond, creating a critical dialogue. They are aware, however, of the limits of remembering what is said in verbal feedback and felt that some written record would be helpful, though their preference if only one type of feedback was available would be for verbal feedback. In large groups, students suggested providing opportunities for open discussion and opportunity to respond to feedback. Students inevitably remembered the things that they needed to improve rather than the things that they were commended for. Students were aware that the feedback they were given was the driver for improving their own performance.

"It stimulates and can be quite inspiring."

Future development

- Students felt that although they did improve their visual assessment skills through continual practice, there was a need for advice for students on initial preparation for visual assessment and presentations. At present such advice is limited to a written form which is not tailored to the visual preferences of art, design and media students. The collaborative LearnHigher CETL project is currently developing resources in this area.
- The creation of staff development resources to support tutors involved in studio-based visual assessment, particularly with regard to supporting students with particular learning needs or with an international background where technical/critical language may be more difficult to understand or remember if used in verbal feedback.
- Further analysis of visual assessment interaction and exploration of the language of critical analysis, articulation of process and context and development of visual skills.

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MAKING THE STUDENT FEEDBACK QUESTIONNAIRE A CONTEXTUAL, REFLECTIVE TOOL FOR TEACHER AND STUDENT ALIKE

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Abstract

Evaluation instruments designed to gather student feedback are potential sites where learning, teaching and research meet in higher education. Such instruments can be designed not only to gather student perceptions on a particular course/ teaching, but also to further students' skills of reflection in ways consistent with and appropriate to creative disciplines, in this case fine art studio practice. This paper discusses adjustments to the presentation of student feedback questionnaires, such as the inclusion of visual images, and suggests a reconsideration of the types of questions posed.

Questions

- In what ways can evaluation instruments be designed to be more sensitive to the visual arts context?
- How can the purposes of the evaluation of teaching practice and the assessment of student learning be made to interrelate?

Keywords

Context-sensitive, evaluation instruments, feedback, fine art, images, questionnaires, reflection.

Introduction

Evaluation can be a formative process of reflective and reflexive practice and learning. The purposes of the evaluation of teaching practice and the assessment of student learning need not be exclusive. In current educational theory, reflective practice is considered a skill that is essential to teachers who hope to be effective in the learning of their students, as well as being a fundamental skill for lifelong learning (Bell, 2001). Evaluation instruments designed to gather student feedback are potential sites where learning, teaching and research meet in higher education. This paper considers how such instruments can be designed not only to gather student perceptions on a particular course/ teaching, but also to further students' skills of reflection in ways consistent with and appropriate to creative disciplines, in this case fine art studio practice. The evaluation instrument can be used as a critical tool for both the teacher and the student – to reflect, analyse and reconsider current practices and their effects on learning.

Generic student feedback questionnaires can be adapted to become context specific, and to encourage alternate means of expression, communication and reflection. This paper discusses adjustments to the presentation of questionnaires, such as the inclusion of visual images. It suggests a reconsideration of the types of questions posed, with examples from questionnaires that attempt to encourage students' self-reflection.

The purpose of formative evaluation instruments

Formative evaluations identify problem areas and address these, building on the strengths of teaching and courses. The designers have as their motivation improvement, development and learning. For evaluation instruments to be developmental, they should be exploratory rather than confirmative (Starr-Glass, 2005). They should be valid and context-sensitive so that the teacher does not fall into the

For evaluation instruments to be developmental, they should be exploratory rather than confirmative

trap that Ramsden (1992) argues is all too prevalent, where "much more space and effort is devoted to measures and exhortations to measure than to what is being measured". That evaluation instruments should serve a *direct purpose in facilitating* student learning, is the ethical concern that has had the most impact on my thinking about evaluation instruments in the context of my teaching. For while feedback is directed at focusing and improving teaching, often little attention is paid to developing students' learning strategies (Powney and Hall, 1998). This is certainly at odds with current theories on 'good' teaching being centred on student learning. For this reason, consideration should be given to the timing and placement of the questionnaire within wider processes of reflective learning.

While information gathered can be about pre-determined issues so as to provide evidence of and influence decision-making, Starr-Glass (2005) argues persuasively that such approaches often leave out "the unspecified and the undefined or the ill-defined". In departments that do not have conservative understandings of evaluation, more creative solutions such as journals, personal development portfolios, free writing activities, metaphor, story telling and image associations are possibly better suited for the students to be expressive about or reflect on their learning experiences and consider future actions. In addition, whilst reflection on students' artwork can be helpful for evaluations, Parker (2003) warns that "the point is not what they end up with, but what they experience while a student: the life of a scholar in a community practising its discipline". Reflective, formative evaluation instruments can further emphasise the importance of the process of learning over the final art 'product'.

In broad terms, instruments for gathering student feedback can be seen to have four aims that I would argue need not be exclusive:
- many are designed to collect the perceptions of student satisfaction of teaching and courses
- some try to comprehend how much the students have learnt
- others allow for an appreciation of the students' experiences
- while others aim to have educational worth for the participating student.

Student feedback questionnaires

Over the past two years of my teaching at a higher education institution in South Africa, I have experimented with student feedback questionnaires (SFQ) as my formal evaluation instruments. The emphasis originally was on gathering qualitative data that reflected the students' experiences of the courses and my teaching, so as to make improvements. I found that because many students were unfamiliar with such formal evaluation instruments, each SFQ required an explanation to communicate its purpose, in the hopes of improving the quality of student feedback. As I began to research particular areas of my teaching and courses, I also began to shift the emphasis to comprehending the students' learning. For example:

"This questionnaire is now looking at how much you learnt. It has been designed around the assessment indicators for the course, and helps your lecturer see if the course is helping you achieve its aims. Think about your answers before writing, and try to respond honestly and with consideration about what you learnt (not necessarily the same thing as what you liked)."
(SFQ, Aug 2006)

Open-ended questions ranged from behaviour questions ("I would like the teacher to continue to... do more... do less..." (McKeachie and Kaplan, no date); opinion questions ("What other criteria do you think would be important to include?"); emotive questions ("What aspects of the course engaged you?"); to knowledge or content questions ("Discuss the range of skills you learnt"). Mostly the questions were designed to gauge which strategies the students found facilitated their learning, to question the validity of different aspects of the teaching or the course. All the questionnaires ended with open-ended questions, to allow the students enough 'space' to express themselves, and for issues to arise that I may have overlooked in the earlier questions.

Making the SFQ a context-sensitive, reflective instrument

These questionnaires were adjusted after consulting some senior students before I administered them to the students I was teaching [examples will be available at the conference]. One interesting observation made was that the visual effect of the questionnaires had an impact on the students, for example if lines provided for students to write on were enclosed in a box or not. Students found these restrictive, as extra points could not be added alongside. I was quite surprised that as a 'visual person' asking feedback from other 'visual people' I had not considered the implications of how a questionnaire *looked*. This began a quest to design questionnaires that are not just visually interesting (to motivate and encourage interaction) but more importantly act as *visual trigger*s to the contexts on which I am asking feedback.

Students' responses to changes, such as the inclusion of images, have been enormously positive – bridging the gap between what students interact with daily in fine art education and the evaluation instrument. Writing is often incongruent to the context of fine art studio practice (which is characterised by informal, verbal and public communication) and therefore can create the anxiety of written assessments. The visual weighting of instruments can help set the tone of the evaluation.

In response to McKeachie and Kaplan's (no date) ideas I really began to question the ethics of asking students to provide feedback, without considering how to develop their learning in the process:

"All of us could do a much better job of introducing the educational rationale for filling out these forms. We can certainly create forms that encourage students to be reflective."

During a Digital Art course in 2006 I adapted my SFQ to become a reflective tool for the students. I had evaluated this course previously, and felt that the teaching and course quality had reached a plateau. The small group of students (10) were enthusiastic to participate when I discussed that I wanted to include questions aimed at helping them become more reflective in their learning. The SFQ began with one page on their personal development: tick boxes about their aims and their degree of commitment; asking them to identify what they felt they would need to do to achieve these aims; and a graph to indicate which influences and stimuli (teacher, technical workshops, studio, interaction, working alone etc) affected growth in their learning. The second page contained questions on the course and teaching.

The graph was an attempt to enable students to represent their learning visually. Students found the graph 'fun' but too foreign to their context to engage with comfortably. A happy accident occurred when this SFQ was emailed to a student who could not attend the evaluation session. This student felt ecstatic at seeing the immediate representation of the graph when he typed the values directly on the computer. I realized that the students could have in fact responded to the questionnaire on the computers in the lab. In future, for digital art and new media courses I would like to use electronic instruments, whether adapted SFQs or more complex interactive web-like sites.

'Closing the loop' is a key edu-speak phrase which refers to when student feedback feeds into the improvement of teaching and courses and is echoed in return to enhance students' learning. Feedback to students following an evaluation can have an effect on their perceptions, but many caution that assumptions cannot be made about the link between feedback and improved learning (Powney and Hall, 1998). This is often because feedback is elicited to focus on improving teaching and courses, and not on the building of students' learning strategies. In my written feedback to these students, I began with an in-depth discussion of the 'personal development' page. This feedback included both their peers' comments on how to improve on their learning, and

Because feedback is elicited to focus on improving teaching and courses, and not on the building of students' learning

my own observations and suggestions. Many students responded that they would print out the page on their own development and keep it. The sense of ownership and sharing of ideas that the 'feedback platform' can offer, makes it valuable to both the teacher and learner.

Challenges

Feedback provides contextualised impressions of the actual experience of the course - it is 'the map' and not 'the territory' (Korzybski, in Starr-Glass, 2005). Although the usefulness of such responses, in terms of quality assurance processes, is difficult to ascertain and presents problems with interpretation and reliability, this does not make them invalid for the teacher nor a meaningless experience for the student. Far from it – students involved in the exercise discussed above communicated that they were extremely grateful for having had the opportunity to consider, explore and share learning strategies. A possible solution would be to have a balance between the more traditional instruments and these, until courses are at a point when the quality plateaus. For that period of time, alternative approaches and instruments that encourage student reflection and self-evaluation could be used exclusively.

My emphasis in this paper is on making the process of evaluation context-responsive and educational for participating students. Even when using instruments such as SFQs, the evaluation process can help students "gain a better understanding of the goals of education, stimulating them to think more metacognitively about their own learning, motivating them to continue learning, and encouraging them to accept responsibility for their learning" (McKeachie and Kaplan, no date).

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ASSESSMENT IN THE ARTS: QUALITATIVE AND QUANTITATIVE APPROACHES

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Abstract

This paper raises a number of issues and questions regarding, on the one hand, a predominantly *qualitative* assessment system emphasising verbal reporting on achievement; and on the other, a *quantitative* system emphasising numerical scores as a measurement of achievement. An exploration of relevant historical and background factors introduces a discussion about knowledge, interpretation and learning. It is argued that quantitative assessment tends to impede the development of deep learning and creative practice, while qualitative assessment is a very effective interpretative and evaluative process that can energise and empower individuals and encourage imaginative and critical thinking.

Questions

- Why do we use quantitative assessment so frequently in arts education when it appears to have very limited educational value?
- Why do we use quantitative assessment so frequently when it appears to conflict with, or contradict, many contemporary theories of knowledge and learning?
- How can we make greater use of modes of assessment, particularly qualitative modes, that are more consistent with contemporary thinking and more effective in promoting learning?

Keywords

Assessment, creativity, evaluation, formative, indeterminacy, interpretation, knowledge, qualitative, quantitative

Introduction

This paper raises a number of issues and questions regarding two very distinct, though at times overlapping, approaches to assessment in the arts: on the one hand, a predominantly *qualitative system* that foregrounds verbal reporting on achievement; and on the other hand a *quantitative system* that foregrounds numerical scores as a measurement of achievement. I begin by exploring some relevant historical and background factors and then go on to develop various threads of argument about knowledge, interpretation and learning. I hope the paper will be useful as a contribution to the ongoing debate about assessment in the arts. I argue in favour of the use of a qualitative system wherever possible, for reasons which I hope will become clear.

Brief genealogy: competition, quality control and gatekeeping

Broadfoot (1996) and others (Hoskin, 1979; Ball, 1992) have described how the development of assessment procedures in the 19th century was determined to a large extent by the need to establish competences in the rapidly growing professions and commercial institutions of the time: "This concern was reflected in the [introduction] of qualifying examinations for entry to particular professions and institutions […] The pressure of numbers, together with the need for comparability meant that such examinations were formal written tests." (Broadfoot, 1996, p. 31). This development, driven by the demands of employers and professional bodies to impose strict selection regimes on the workforce, has continued, though with some changes of emphasis.

The reliance on quantitative assessment data in fields in which the body of knowledge is largely quantitative and clearly determined (eg mathematics or the 'hard sciences') may be justified or even necessary. To transplant or impose such quantitative methods in other fields is, however, not justified, necessary or effective. There is no intrinsic educational value to such methods, and indeed they seem to fly in the face of an

educational rhetoric that currently prioritises 'student-centred learning', 'creativity' and 'life-long learning'. The marginalisation of non-measurable, or difficult to measure, qualities and aptitudes (such as 'creativity') is only one of the negative effects of over-reliance on quantitative assessment.

Quantitative and qualitative assessment

Observation, evaluation and measurement in the fields of art and learning are not precise or objective processes. They are value-laden subjective processes involving two or more, often unequal, centres of power – most obviously student and assessor. Qualitative assessment methods usually comprise verbal descriptions and analyses of student behaviour and production (spoken and written), providing a critical commentary, advice and other feedback, useful as a formative aid to learning. Quantitative assessment comprises numerical scores or grades that are intended to measure relative achievement of prescribed outcomes or criteria, and which provide comparative data for ranking students against each other in a given cohort, or even across cohorts, year groups or different subjects. As far as the arts are concerned, in the latter case qualitative interpretations or judgements are *somehow* translated into numerical scores. It is obvious that there are profound differences between measurement and critical evaluation and interpretation. As I understand it 'assessment' comes from the Latin root, *assidere*, meaning 'to sit beside' – in our case, 'to sit beside the learner' - observing, reflecting upon and commenting upon, what is done, how it is done and what is produced in the process of learning. It is itself a narrative episode in the continuum of learning. A verbal record or report can convey the nuances, complexities and provisional quality of such a narrative, in a way that a numerical score cannot.

Formative and summative assessment, deep and surface learning

Given the importance of qualitative enquiry, experiential learning, inter-subjective dialogue and creative practice in arts education, it is surprising, and seemingly inconsistent, that, when it comes to assessment, quantitative modes are prioritised. This is even more surprising when one considers the rhetoric of many contemporary critical discourses (as taught within most HE institutions) which place emphasis on hermeneutics, constructivism, pluralism and relativism – all of which point to the conditional nature of knowledge and the provisional nature of interpretations and judgements. It seems odd that programmes of study which, for instance advocate qualitative enquiry, discourse analysis and perspectivism, should employ modes of assessment that are rooted in positivist beliefs in objective measurement and statistical data.

It is widely accepted in educational development circles that 'deep' learning is more important than 'surface' learning. The latter is characterised as the passive accumulation of information, to be memorised and reproduced at assessment points. The former is characterised as active understanding and *learning how to learn*, developing the ability to be critical, self-directing and creative. Research supports the view that a reliance on summative or quantitative assessment, engenders and reinforces surface learning, while formative, qualitative assessment tends to promote deep learning. Formative assessment also informs and energises learning, while summative assessment can alienate individuals from the learning process and become side-tracked by the pursuit of false goals – for instance the acquisition of marks or grades, rather than understanding and skills.

Given these widely acknowledged correlations between summative/quantitative assessment and surface learning, and between formative/qualitative assessment and deep learning, it is, again, surprising that summative and quantitative modes dominate the education system.

The zone of interpretation

If, as Barthes, Eco, Dickie, Rorty, Danto, Gadamer and many others would argue, the audience/observer is fundamentally implicated in the making of meaning in art, if the artwork is both the material event or object and the unfolding of interpretations that accompany it, then we are all participants in the making of the work. We cannot remove ourselves from a hermeneutical process that, by definition, is unfixed and provisional. There is no terminus to interpretation, and no measurement that can be made that could constitute a summative view. Likewise there is no place to stand outside the zone of interpretation, no neutral position from which to

make measurements. Learning can be considered as a site of interpretation, or, as Ricoeur (1974) puts it, "a conflict of interpretations". Every time we attempt to measure or quantify a process of learning, whether manifested in a performance, a text or an artwork, we are attempting to measure a process in which we are deeply implicated. We cannot separate ourselves from the mutuality of learning - a process of interdependent dialogues, interpretations and actions.

Quantitative assessment excludes the nuances of multiple interpretations and evaluations in favour of an absolute unitary measurement. But any attempt at 'objective' measurement (quantitative assessment) is intrinsically flawed and it inevitably leads to reification, abstraction and generalisation – the opposite of what is probably intended.

presented for assessment. In most assessment meetings there is an alternating pattern of convergence and divergence of opinions, interpretations, prejudices and insights – energised by the particular dynamics of the group. However this rhythm of debate and open-ended exchange is always constrained by the need to arrive at a definitive single mark, the holy grail of quantitative assessment. In some ways the process would be much more transparent and informative to the student if the marks of each assessor were published and a cluster of marks were awarded for each unit of assessment – not one mark! This would reflect the variety of evaluations and suggest that the process, and the mark, is conditional rather than absolute.

Observation, evaluation and measurement in the fields of art and learning are not precise or objective processes

Assessment: advocacy, debate and enforced consensus

I have observed, and reluctantly participated in, too many summative assessment meetings to believe they are anything but erratic, inconsistent and, at times, absurd. Such meetings reflect the impossible demands of two conflicting systems of assessment, the qualitative and the quantitative, and they highlight the inherent difficulties in translating qualitative interpretations and provisional judgements into quantitative scores and absolute measurements. Assessors arrive with more or less certainty about the fairness of the marks they wish to give to each student's work. On most occasions they leave the meeting more or less certain of the fairness of the marks that have been finally awarded – even though it is not unusual for there to be major differences between the two sets of marks.

These differences emerge as the result of the adversarial process of advocacy and argument that characterises most assessment meetings. This process is a mixture of negotiation, rational argument and peer pressure, centred on subjective opinions about the degree to which students have achieved particular learning outcomes, as manifested in the artwork or texts

The continuum of learning: indeterminacy and divergence

If learning is a continuum of cognitive processes, manifested in actions and constructs, then the outcome of learning is *more* learning, a continuance of action, construction and reflection. Outcomes may well be unpredictable, unknown at the outset of an activity or only become apparent long after the supposed period of learning. If assessment is to engage with, and be indicative of, this dynamic continuum, then describing qualitative processes of change, transformation and unfolding possibility is likely to be more useful and achievable than attempting to measure the quantity of accumulated knowledge or competences, let alone more abstract qualities such as creativity and imagination.

"The indeterminacy and unpredictability of learning is very apparent in arts education where creative practice is at the centre of the curriculum. Outcomes-based assessment inevitably privileges and reinforces outcomes-based learning, and outcomes-based learning tends to develop convergent thinking at the expense of divergent (creative) thinking."
(Danvers, 2003, pp.50-1)

It is odd therefore that more resistance has not been evident in arts education to the rapid increase in both outcomes-based assessment and quantitative assessment – the latter an apparent attempt to measure learning processes that are often indeterminate, and to impose summative judgements on open-ended enquiry.

Perspectivism

Two other views that have wide currency in philosophy and critical theory also have a profound bearing on assessment: *perspectivism* and *revisibility*. Perspectivism involves a belief that knowledge is always partial, incomplete and contingent. There can be no absolute, objective or complete view of any subject, topic, idea or issue. Each perspective needs to be considered on its merits, as shedding light from a different angle, and in relation to other perspectives, as providing a more rounded picture. No perspective should be considered as definitive or as representing the final word on a particular topic. While qualitative assessment can take account of different perspectives and articulate nuanced judgements or opinions (in joint reports and numerous formative feedbacks), single numerical scores or grades cannot.

Revisibility

Given the relative, fluid and perspectival condition of knowledge, it follows that all views, theories and opinions are subject to revision. Indeed effective learning, if it is to avoid dogmatism, prejudice and eventually bigotry, involves a constant willingness to revise, rethink and reformulate – to be open to new 'facts' and ideas, and to seek out alternative perspectives that are challenging and revitalising. This inherent revisibility of knowledge has implications for our thinking about assessment. Judgements can only ever be tentative and conditional, subject to continuing revision over time. Assessments are made from a particular perspective, at a specific moment in a continuum of changing views. Any mis-representation of this process ought not to go unchallenged - for example, by representing a particular judgement as final and summative, or as a

fixed measurement or quantitative 'fact' rather than as a qualitative opinion.

It is not surprising that contradictions and tensions are likely to arise from the adoption or imposition of assessment regimes which do not reflect current ideas about knowledge and learning.

Conclusion

It is my belief that the dominance of quantitative and summative modes of assessment in arts education is largely the result of governmental and institutional demands for statistical accountancy, quality-control accountability and hierarchical ladders of progression (and exclusion). It is very difficult to identify any significant educational value that can be ascribed to them. Consequently we should resist the deployment of such modes wherever possible. Qualitative and formative modes of assessment are much more effective ways of interpreting, evaluating and energising the creative practices of the arts, and should be used wherever possible in arts education.

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STRAND C3:INTRODUCTION: STRUCTURES AND PEOPLE

David Clews

In this session, presenters discuss how varying initiatives are developed to support either student learning or teaching practice. There is an intention in each to situate the discussion in relation to particular disciplines. These range across architecture, fashion and textiles, art and design, music and performance, publishing and broadcasting and graphic design. Despite the diversity evident in the papers, they are unified by discussing the links between the activities of practice within a discipline, how theorising practice enhances activities, and how the activities in academic environments relate to those in professional practice contexts.

Debates around the effectiveness of higher education programmes to equip graduates with the skills necessary for their future practice are common and constant. Creating Entrepreneurship, a report based on research undertaken by the Higher Education Academy Art, Design and Media (ADM-HEA, 2007) shows that departments across the UK are aware of and taking action to ensure that their undergraduate students are supported in learning the skills, attitudes and behaviours that will support their future development in their chosen disciplines, be this in commercial or not-for-profit sectors of the creative and cultural industries. These initiatives are in response to efforts by UK governments to capitalise on the rapid growth of the creative and cultural industries nationally and globally.

As early as 1997, the National Committee of Inquiry into Higher Education (Dearing, 1997) proposed wide-ranging changes to education at all levels including closer attention to the ways in which education will meet the future needs of society, with particular reference to industry and the economy. The Dearing Report was undertaken at a time of rapid expansion in field of post-16 education and growth in the number of UK graduates is noted in the recent Leitch Review of Skills (Leitch, 2006). This report also warns of the importance of providing educational environments that are relevant, and identifies the need to provide educational opportunities to those who have completed the normal cycle of school qualifications. This work is contextualised for the creative and performing arts in further government reports, for example in the Cox Review of Skills (Cox, 2005) that advocated the harnessing of design graduates' skills in a wide range of industry and commercial contexts, or the Department of Culture Media and Sport paper on developing entrepreneurship education in further and higher education programmes for creative and performing arts (DCMS, 2006). Other agencies have built on and responded to this work, for example work undertaken by the National Endowment for Sciences Technology and the Arts and the Art, Design, Media Subject Centre (NESTA, 2006, ADM-HEA, 2007) or by the UK's Design Council and Creative and Cultural Skills (Design Skills Advisory Panel, 2007).

In the UK, architecture is exceptional in the creative and performing arts and design fields as the only professional activity within the broad definition of creative industry to have a professional and statutory body, the Architects' Registration Board (ARB) that in effect licenses higher education programmes. Ever since the formation of the Royal Institute of British Architects in 1837, the debate on how and what constitutes the proper education of architects has been at the centre of their agenda (Clews, 2001). In 2001 the ARB undertook a major survey of UK architects and concluded that, recent, mid-term and long-term architectural practitioners believed that architect's education did not prepare them well for commercial practice. This survey also strongly advocated that teachers of architecture should be able to "demonstrate recent real-life projects" and

that practitioners of experience/repute should be encouraged to teach" (ARB, 2001).

Pierce and Matthews' paper looks at a different approach to addressing the link between activities in the studio within the academy and in the commercial studio through forming direct links between practising architects and the learning of aspiring architects. Their project claims to address broad issues relating to how the academic programme is informed by current professional practice and how continuing professional development might harness the best new practice being developed in academic contexts. In particular they explore how communications and on-line technologies can facilitate collaborations between designers working within education and commercial practice

for these has been further developed, in the UK, by the Higher Education Funding Councils (see, for example HEFCE, 2005) and the Quality Assurance Agency (see: www.qaa.ac.uk), with the Higher Education Academy offering "Guides for Busy Academics" (see: www.heacademy.ac.uk). Long before any of this, in 1991 the UK Government Department of Employment had established the Centre for Recording Achievement to: "support staff in schools, colleges and higher education who were interested or involved in recording student learning and experience and in using the process to support student progression into higher education" (Angel, www.angel.ac.uk, 7 June 2007). This has now developed into a website and resources that aim to "serve anyone interested in the quality of Recording Achievement, Personal Development Planning and

Debates around the effectiveness of higher education programmes to equip graduates with the skills necessary for their future practice are common and constant

In a related discussion, Walker's paper discusses how an environment can be created in which teachers develop entrepreneurial approaches to their practice. The "Artswork" project discussed here aims to develop more explicit links between the world of work in the creative industries and learning in creative and performing arts. This paper suggests that explicit relationships can be identified between innovative and entrepreneurial teaching practice and students' practice-based learning activities. It builds an argument for seeing this teaching practice in the context of academic and policy debates around entrepreneurship and creative industry development.

Webb's paper discusses "Personal Development Planning" (PDP), another aspect of contemporary higher education practice first systematically articulated in the Dearing Report (Dearing, 1997). PDP was conceived as a way in which students would record and reflect on their progress in education and was intended to refocus education towards student-centred rather than teacher-centred pedagogies. The rhetoric

ePortfolios" (CRA website www.recordingachievement.org,). Despite the emphasis and efforts of a range of agencies. Webb observes that students (in art and design) show a "reticence to engage with PDP" and explores why this might be and how PDP might be better shaped to meet students' expectations and be situated within their practice.

Based on 25 years in design and textile design education Margaret Perivoliotis discusses how educators might respond to the fast-changing situations in design practice. She discusses the pressures on education of addressing globalization, changing demographics and the need for sustainable development in education and in commerce. Her observations are drawn from experiences in a technologically orientated discipline and collaborations between design education and design professionals. Her paper refers, in particular to "pedagogical practices in the new European multi-cultural classroom".

Finally, Nunn and Cope explore why the teaching of contextual and theoretical frameworks within

the visual arts may be regarded by students as "largely irrelevant to the teaching of studio-based practice". Theory has been a core part of the undergraduate education curriculum in the UK since the 1960s when the National Advisory Council on Art Education (NACAE, 1962), known as the Coldstream Report articulated the need to introduce formal theoretical and contextual elements to the higher education curriculum for the arts. In other European countries, where either 'the Academy' or the more recent 'Bauhaus traditions' have informed the development of curricula, one might expect less tension in a debate about the purpose of contextual and theoretic knowledge in arts and design practice. However, despite this, these debates still run and the relationship between theoretical and practical aspects of learning remain contested. Nunn and Cope state that the aim of "theory in practice is to initiate creative and innovative teaching strategies… by synthesising contextual and practical elements in a relevant and meaningful way". They discuss how, by harnessing learning through doing and deliberate practice and linking this to reflections on meaning and context, students are encouraged to consider how their practice activities relate to and are informed by and situated within a cultural context.

Each of these papers addresses at least one important issue relating to the evolving policy landscape affecting higher education in the creative and performing arts and design. They touch on the links and collaborations between academic environments and creative industries, the tensions between the need to deliver relevant occupation skills within the curriculum and enhance reflective practice. Finally these papers discuss the role of e-learning and how this can be shaped to the needs of the disciplines and the learning of students as well as those already working in the professional arena.

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EDUCATING ARCHITECTS: ONE APPROACH IN AN ONGOING DEBATE

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Abstract

For a long time there has been concern about the compatibility of specialised design studios and the aims and objectives of higher education. There is an argument that architectural education does not deliver what professional practice wants. As one response to this debate, Mis-Architecture (www. mis-architecture.co.uk) is developing an interactive model for architectural education. Professional practitioners re-enter higher education in an online environment where they engage in the student's design practice and expand their Continuing Professional Development education. In this format 50% of learning and teaching is web-based, and in collaboration with practitioners, researchers at other international institutions and professional organisations.

Questions

- Can architectural design studio tutors signal the relevance between the education delivered and the profession, form practical partnerships with the profession, and lead any such collaboration?
- What are the issues of moving to a position where at least 50% of the learning and teaching is delivered online?
- Is the design studio the appropriate environment to attempt to reintegrate the profession and education?

Keywords

accessibility, architecture, collaboration, education, e-resources, mis-architecture, professional practice, studio design, web-based learning.

Key questions and context

Can specialist architectural design studio tutors (1) describe their students' work; (2) explain why it is done the way it is (in other words, is it possible, however much the method/process is tied to the tutor's research objectives, to describe how the approach forms an appropriate model for learning and teaching architecture?); (3) indicate how their method/process equips students to match the professional criteria invested in a validated programme; and (4) signal the relevance between the education delivered and the profession?

Mis-Architecture (www.mis-architecture.co.uk) is the PG Diploma in Architecture (Part 2) studio tutored by Dr Christopher Pierce and Chris Matthews and located at the University of Brighton. In its seventh year, previously at the University of Liverpool and the University of Westminster, this Diploma-level studio has generated many award-winning projects, presented two substantial exhibitions dedicated to the students' work ('Mis-Architecture: Selected Recent Work + Work-In-Progress 2000-06', 2 to 11 November 2006, Faculty of Architecture and Fine Art at the Norwegian University of Science and Technology in Trondheim, Norway; and 'Mis-Architecture: Recent and Current Work', 20 February to 12 March 2004, Academie voor Architectuur en Stedebouw Tilburg, The Netherlands) and placed nearly 10% of its graduates in some of the world's leading architecture and design practices, including Rem Koolhaas/OMA, Foster Associates and the Richard Rogers Partnership.

For a long time, however, there has been a concern with regard to the compatibility of highly specialised or stylised studios and the aims and objectives of higher education, especially how such distinctive teaching methods accommodate the typical range of individual student skills, abilities and ambitions.

Among many there is a firm belief that architectural education, at least in the United Kingdom, does not deliver what professional practice wants. Whether or not one agrees with this position, it cannot be disputed that the majority of students, in our case 90% of the studio's graduates, will target or be employed by general practices without a national/international research basis. As one response to this ongoing debate, Mis-Architecture is developing an interactive model for architectural education where professional practitioners re-enter higher education in an online environment, directly engaging in the student's design practice on a regular basis in a 'hands-on' learning and teaching capacity to expand their Continuing Professional Development (CPD) education.

We are doing this by gradually moving to a format where at least 50% of the learning and teaching is delivered online and in developing collaborations with selected (1) professional practices, including SOM, HOK and Sutherland/Hussey Architects; (2) researchers at other international institutions, including the University of Edinburgh, University of Ghent and NTNU Trondheim; and (3) professional organisations, including the Architects Registration Board (ARB), the Royal Institute of British Architects (RIBA) and the European Association for Architectural Education (EAAE). In this way, the design studio becomes the learning space reintegrating the profession and education. Rather than perpetuating the line-in-the-sand between the two, or adopting the position where education attempts to mimic the profession as a teaching model, in this prototype the professional practice is situated in the institution and the higher education architecture studio forms a conduit informing and playing a leading role in practice. Is this a unique approach to the situation or are other design studios already engaged in similar or even more advanced practices?

Mis-Architecture: a case study

Mis-Architecture has developed a highly refined teaching method for postgraduate architectural design that is concerned with readings and *mis*-readings of drawings. The studio articulates a method for the development of creative practice by prioritising the role and nature of the drawing as the principal means of production and communication of the architect. Our students use drawings to generate ideas and speculative images for architecture across London. The city's status, not the more conventional concerns of site/place, prompted this focus, although selected sites are unexpectedly and dramatically reimagined as a result of the drawing process. The studio's method stems from the common Surrealist technique of placing the 'unusual' in the 'usual' and it aims to identify the university design studio as an essential laboratory for experimentation in architectural production. Projects have ranged from urban designs like entertainment (e)-city by Dirk Vogel and Markus Weber, recipients of the 2001 Cittadellarte and Arts Council of England Fellowship and invited participants in Torino 2000: Biennale of Emerging Artists; to infrastructural projects including the Dickensian Refuse Transport Station of Jason Mistry and Van Tran, recipients of the 2002 CLAWSA Student Award and selected as two of the top 2003 UK architecture graduates by Building Design magazine (www.presidentsmedals.com); and temporary structures evidenced in the epigeic gateways to the 2012 London Olympics designed by Karl Singporewala, recipient of the RIBA South East Student Prize 2006. For further examples see: Vehicle for Housing (2004), Stephanie Southward and Tom Wells, University of Westminster (www.mis-architecture. co.uk) and Perforations of Transparency (2005), Laurie Marlow, University of Brighton (http://www. presidentsmedals.com).

Two parallel techniques inform the studio's working methodology – one of fictive readings, like those that an art historian can construct from drawings, and another that utilises a method of editing and process drawing from architectural practice. These work together to challenge and, at the same time, motivate and inform the architect's drawing process. In all stages of a project, the drawings are expected to maintain a state-of-flux/indeterminacy. In this way, the work is constantly open to *mis*-interpretation and redirection. One consequence of this method is that a project's function/programme/use is not prescribed but invented, and the taxonomy of building types is constantly renewed and expanded. The studio repeatedly *mis*-reads, *mis*-scales, *mis*-shapes and generally highlights any other *mis*-demeanours involved in the making of drawings and their presentation.

The studio's starting point is always something

Among many there is a firm belief that architectural education, at least in the United Kingdom, does not deliver what professional practice wants

non-architectural. Typically, two or more 'found' scientific drawings/diagrams are combined, in a six- to eight-week drawing exercise, by making overlays and combinations of information, patterns, repetition of patterns, interferences and transparencies with the sole pursuit of making a beautiful two-dimensional image with three-dimensional qualities – what is termed the 'base drawing'. The only requirement is that the 'found/imported object' is from another profession whose primary means of communication is drawing - for example chemical engineering, hydrography or fluid mechanics - and involves some of the nomenclature associated with architectural drawings. The 'base drawing' is the 'unusual' object. The subsequent stages of the eight-month design programme involve all of the techniques of mis- architecture, and typically a current building proposal - eg. Allies and Morrison's 2012 Olympic Village and HOK's Royal London Hospital - is radicalised by following a drawing process that re-scales, re-reads and *mis*-reads the 'base drawing' to significantly impact and reshape the proposed project, often in incalculable ways, while working within the original proposal's material and programmatic constraints. This constraint highlights the studio's effect, focuses its debate and signifies its challenge to the conventional means of architectural production. In the process students are encouraged to push ideas to their extreme: known aspects of architecture are *mis*-used, *mis*-represented and *mis*-understood and unknown aspects are invented.

The resulting work is inventive, acutely attuned to contemporary urban and architectural issues and poses key questions of how design is approached. The drawings are the driver/generator for the design and also the studio's key parameter in terms of medium. Intrinsic to this process is that the conventions of architecture bend and stretch to accommodate the student's investigation.

Expanding the learning and teaching space: www.mis-architecture.co.uk

Mis-Architecture is developing a practice-based interactive learning and teaching environment in the PG Diploma in Architecture (Part 2) course at the University of Brighton. In its outreach – incorporating local, regional and international professional links and partnerships – mis-architecture.co.uk aims to develop new sources and forms of material for learning and enhance/demonstrate the course's research related content and its career-related applicability. It seeks to increase accessibility to knowledge and information and, by forming an extensive network of collaborations, to widen participation and access in higher education.

One key feature of the emerging online site is to visually describe and practically demonstrate the learning and teaching process that postgraduate architecture students follow in order to achieve professional qualification. Essentially, it maps the student's individual project development from start-to-finish against the ARB Criteria for Part 2 qualification. In this way it acts as a practical manual for architecture students from across the European Union (EU) by demonstrating how professional validation criteria are related to studio design courses and how they can be achieved through a practical demonstration of the student design process. In time, it will give legislators access to the latest developments in the sector and it is potentially an important forum/resource for these individuals and institutions to understand, comment and test the educational process. In the longer-term it might be expected to serve as a resource/model for other studio-based courses in the arts.

The Mis-Architecture web-based project has four aims:

1 **Dialogue:** To increase/promote dialogue as well as collaboration between University of Brighton students, internal and external researchers and professional practitioners by providing an environment that supports and encourages intellectual development, creativity, professionalism, free exchange of ideas, collaborative work and the sharing of experiences and insights that promotes experiment, risk-taking and the pursuit of excellence.
2 **Accessibility**: To make past and current student design work (to include project work at all stages of the design process in Diploma 1 and Thesis Design Project in Diploma 2) of Mis-Architecture available as a learning and teaching resource, specifically geared to present and future students, within an interactive and open environment that expands the learning and teaching space beyond the physical studios.
3 **Enhancement of curriculum:** To create e-learning content for the development and support of curriculum, by providing important examples of student precedents and related material to assist the current student in comprehending/translating course programmes, objectives and learning outcomes into practice, visualising the course structure and its relation to the professional framework from the student's perspective and through the work that they are producing, and by promoting new learning and teaching methods in the public domain.
4 **Learning and teaching materials:** To build and sustain e-resources that are innovative learning and teaching methods using advanced Web 2.0 technologies in order to be at the forefront of current debates over the future shape and form of learning and teaching, as well as curriculum development, in architectural education in the UK, EU and further afield.

And four intended outcomes:

1 **Collaboration**: To promote enhanced student-to-student contact, communication and collaboration in the course delivery through a user interface created and tailored to the specific needs of the students.
2 **Dialogue:** For internal and external users to have the unique opportunity that an advanced website affords – to follow and be directly involved in the progress of current student design projects through image, video, audio and text-based resources, live online tutorials and conferences, as well as interaction with users through a 'feedback' section that allows uploading image and text files and online communication.
3 **Changing attitudes:** Internally – to more readily and regularly share/exchange design ideas between colleagues and tutors. Externally – to explore/reveal and enter into concrete dialogue over different approaches and methods to architectural design within both architectural education and the wider discipline through the regular dissemination of processes, projects and events.
4 **Meeting expectations:** To broaden and increase the student's learning and teaching experience by extending the physical and intellectual parameters of the traditional design studio into the public domain. This will increase the number of collaborators and critics that the students will encounter in their education; foster innovative intra-, inter- and international university research collaborations; and enhance educational/ professional exchange through targeted connections, both local and international.

THE ENTREPRENEURIAL EDUCATOR IN CREATIVE INDUSTRIES EDUCATION

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Abstract

This paper explores the skills, knowledge, behaviour and values that teachers require within creative industries education, across arts disciplines. It argues for the adoption of a model of 'the entrepreneurial educator' to facilitate students' development of entrepreneurial learning and entrepreneurship in the creative industries, which are characterised by high levels of self-employment and freelancing. The entrepreneurial educator develops the skills, knowledge, behaviour and values to initiate and exploit opportunities in the educational, occupational, social and global environments. She or he situates entrepreneurial learning within these multiple communities, practices and processes, through creative and innovative teaching and learning.

Questions

- What forms of staff development will enable creative industry students to be entrepreneurial?
- How can we enable teachers to adopt entrepreneurial approaches to their teaching?
- In what ways does current policy hinder or enhance support for creative industry students?

Keywords

creative industries education, entrepreneurial learning, entrepreneurial teaching, entrepreneurship, professional development.

Introduction

Current UK policies emphasise the value of, and need for, entrepreneurship to be taught within the higher education curriculum (Dearing, 1997, Cox, 2005, DCMS, 2006). Policy tends to focus on the occupational skills students will need to situate themselves successfully within the creative industries. Policy makers will also need to consider how to develop the roles of educators who deliver, and necessarily innovate, the curriculum in this context. This paper is not concerned with the teacher as entrepreneur in the traditional business sense, but how educational culture and entrepreneurial learning can be affected through the entrepreneurial skills, knowledge, behaviour and values of teachers.

This paper describes the learning and teaching context of Artswork, the Centre of Excellence in Teaching and Learning (CETL) in the creative industries at Bath Spa University, through exploring the factors that will enable teachers to become entrepreneurial educators. I suggest that Artswork creates an entrepreneurial learning environment, across the arts disciplines, which enables and requires its Senior Teaching Fellows to adopt entrepreneurial approaches and practices within their teaching.

My working definition of the entrepreneurial educator is a teacher who develops the skills, knowledge, behaviour and values to initiate and exploit opportunities in the educational, occupational, social and global environments. She or he situates entrepreneurial learning within these multiple communities, practices and processes, through creative and innovative teaching and learning.

Creative industries education

'Creative industries education' is a contemporary development in arts education and is indicative of responses by higher education to international forces of politics, economics, technology and socio-culture (Jeffcut and Pratt, 2002). The relationship between creativity, learning and economics creates some ideological conflict between higher education and industry, most recently through the promotion of the employability agenda. Current interest in entrepreneurship education has evolved through

overlapping debates about employability and creativity with the curriculum.

Entrepreneurship as the "initiation of change through creativity and innovation" (Morrison and Johnston, 2003) describes the set of skills, knowledge, behaviour and values which inform the actions of entrepreneurs. Entrepreneurs may be recognised through the transformation of process and products, which innovate the delivery to, or exploitation of, audiences or marketplaces. Innovation as an everyday practice creates entrepreneurial opportunity, which may stimulate entrepreneurial activity. Entrepreneurial educators, as catalysts of change (Schumpeter 1934), are situated in the learning environment as 'marketplace' and the educational process, the 'product' they develop.

Recent discussions about creativity have moved away from considering the slippery nature of creativity towards considering creative teaching (Oliver, 2002, McGoldrick, 2002 Jackson et al, 2005). Discussions about entrepreneurship may also need to move in this direction – not just in terms of curriculum innovation or focus, but also in terms of the professional development of teaching staff. Brown (2005), Gibb (2005), Pittaway and Cope (2006), amongst others, explore a pedagogy for developing entrepreneurial skills in students, which moves away from the traditional business model, and this paper expands on these by exploring a pedagogy 'of', not 'for', entrepreneurship. As Morrison and Johnston (2003) state, pedagogic interventions could enhance the entrepreneurial potential, of both student and educator:

> "Educational interventions can unlock the potential of entrepreneurship through a focus on the nurturing of innovation and creation, towards commercial application, through the heightening of personal qualities of reflecting, doing, valuing, feeling, behaving and relating to others. They would aim to sensitise potential entrepreneurs to the value of a disposition to personal creativity as related to entrepreneurship." Morrison and Johnston, 2003, p.148)

Artswork and entrepreneurial education

Artswork has a mission to innovate arts education, to enhance the employability and self-employability of creative industries graduates and explore additional themes of creativity and technology. Artswork explores new ways of learning and teaching, to enable students to enter their chosen profession with a portfolio of skills and completed projects that have been shaped, developed and assessed in the context of the marketplace. Entrepreneurial learning has emerged as central to the attainment of these goals. As part of its longitudinal research, Artswork has developed a Learning in the Arts Student Questionnaire (LASQ) to gather knowledge about the needs, expectations and aspirations of creative industry students across three schools: Music and Performing Arts, English and Creative Studies and the Bath School of Art and Design. Data analysis, from the responses of 557 first-year students on course entry (55% of the total cohort), showed that 61% identified the most appealing working environments as running their own business and 87% work freelance as a creative practitioner. Early LASQ data from third-year students on exit, indicates similar findings. This suggests a high demand from creative industry students for educational contexts which support and encourage an entrepreneurial tendency (see also ADM-HEA, 2007). So entrepreneurial learning may need to be explicit within creative industries education from year one.

Artswork created six learning labs: MUSICLAB, BROADCASTLAB, PUBLISHINGLAB, PERFORMANCELAB, DESIGNLAB and FASHIONLAB. These are discipline-focused, bespoke learning spaces, enabling teaching, support staff and students to experiment and take risks in a safe and supported environment. In recognition of their teaching excellence and subject knowledge, a Senior Teaching Fellow (STF) was appointed to lead each Lab. Artswork provides time, space and autonomy (factors which support the creative process) for the STFs to explore their pedagogic practices and for curriculum innovation and development within and across the disciplines. More importantly, it also affords the STFs institutional licence to take risk. This creates three key components related to entrepreneurial education: an autonomous educator, an environment for promoting entrepreneurial learning and teaching and, thirdly, the institution placing high value on entrepreneurial behaviour.

From an educational researcher and developer's perspective, it is evident that the STFs are developing the entrepreneurial skills and values that they aim to develop in their students, so that "what is learnt is

profoundly connected to the conditions in which it is taught" (Brown and Duguid, 1991).

Experimentation and risk taking are often discussed as key attributes of the creative process. However, the entrepreneurial educator is responsible for specific outcomes that have a tangible (market) value within and across industry and education. Thus, the STFs exploit new technology and explore and create collaborations across disciplines and with industry, in order to develop new projects and processes. This approach reflects that: "entrepreneurs are action-orientated and much of their learning occurs through experience and discovery (in Pittaway and Cope, 2006). The relationship between discovery and scholarship is central to educational and professional development and "inquiry, investigation, and discovery are the heart of the enterprise" (Boyer Commission, 1998).

Entrepreneurship as discovering and assessing opportunities, business planning, gathering resources, managing the growing enterprise and harvesting value (Mullins, 2006), describes the role of the STF within Artswork. They have become teacher-managers leading small teams of staff, operationalising Lab development plans in a highly individualised way, and interpreting and responding to educational and industry market needs. As a teacher-practitioner, the STF acts as a creative interface, bridging education and the world of creative industry. As an entrepreneurial educator, the STF develops a community of practice across education, industry and organisational boundaries. This community creates and exploits opportunities for learning capital and 'know who' for student learning, through the STF capitalising on their own skills and knowledge, and that of other professionals, to create educational 'venture'. This aligns with contemporary theorising which "has emphasised the need to understand entrepreneurial learning [teaching] as social practice where entrepreneurs are viewed as practitioners who operate within multiple, overlapping social communities of knowledge and practice" (Pittaway and Cope, 2006). Activity within this context is not self-motivated – the STF aims to exploit networks and collaborations in order to innovate, not just within the curriculum, but to situate the curriculum and student learning within an entrepreneurial context. An entrepreneurial educator enables participation in a social process in which the teacher and learner are jointly operating within an authentic community of entrepreneurial practice.

In terms of learning entrepreneurship, it may be agreed that students need to be situated in entrepreneurial contexts; usually through industry-based simulated projects and tasks. Artswork teaching staff work with students on live or real projects so that the entrepreneurial educator teaches primarily on a " 'how to' and 'need to know' basis, dominated by processes of 'doing', solving problems, grasping opportunities, copying from others, mistake making and experiment" (Gibb, 2005). The entrepreneurial educator however must have a comprehensive knowledge of course design and how students learn. So, in this respect, course design is the change catalyst for the entrepreneurial learning culture.

In Gibb's list of "entrepreneurial values" (2005), those particularly relevant to the STF include a strong sense of independence, a strong sense of ownership (in relation to their Lab and their discipline-based curricula), a belief in being able to make things happen, strong action orientation, and a strong belief in the value of 'know who' and trust. Gibb also lists entrepreneurial characteristics. STFs exhibit aptitudes towards networking, exploiting opportunities, harnessing, marketing, resource identification, creation and development and value focus. Risk-taking, experimentation and the ability to manage change are crucial. Creative problem-solving, independent decision-making, flexibility and confident presentation are key entrepreneurial characteristics, as is the ability to persuade and influence others. STFs are also developing the ability to work across disciplines, acquiring multiple knowledge through the exploitation of opportunities across subject and occupational boundaries; a transdisciplinary and professional agility afforded through, for example, the use of technology.

Conclusion

This paper has explored how Artswork, and particularly its Senior Teaching Fellows, are working within the current policy landscape of entrepreneurship education for the creative industries. Our experience shows that delivering such policy goals within higher education may have broad implications for the evolving debate in that the entrepreneurial approach and practice of

teachers should be considered as a condition for the development of entrepreneurial learning of students.

The model of the entrepreneurial educator, enabled to act through discovery (risk) and discover through action (experimentation), has implications for the professional development of teachers. Entrepreneurial educators create or encounter conditions of ambiguity and take on unfamiliar tasks; factors that may lead to high-pressure teaching and learning environments. Entrepreneurial teaching and learning is a process that needs the support of higher education infrastructure. An entrepreneurial environment, developed through teachers' transformational actions and initiative taking, creates high-value learning opportunities. Both teachers and students will need to look beyond traditional expectations of the higher education context and locate themselves in a broader social and economic context, relating transdisciplinary knowledge to transoccupational skills.

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ENGAGING OR ENRAGING: PROMOTING THE PERSONALISATION OF LEARNING IN ART AND DESIGN EDUCATION

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Abstract:

The benefits of PDP (Personal Development Planning) and portfolio building are becoming recognised within HE, offering inroads for a variety of pedagogic issues. For staff, this learning sits within the making and doing and builds upon practice, but for some students there can be a perceived rift between the expectations of education (perhaps seen as traditionally 'tutor-led') and the integration of PDP (necessarily student-led). PDP therefore presents a paradigm shift which needs to be embedded within a culture, and integrated within the curriculum. This trigger paper discusses certain students' reticence to engage with PDP and the associated problem of enabling the student to identify relevancy according to their practice.

Questions:

- At a recent conference on Student Retention and Progression in HE the issue of transition between pre-HE and HE was raised as a key problem. Some generalisations were highlighted between the culture of pre-HE (eg learning environments that are largely risk-adverse and substantially supported) and HE (an environment that requires independent learners and 'risk takers')[1].

This gap might represent the perceived rift between expectation and reality. Therefore how do we garner a meaningful understanding of what students expect, and thus want from higher education?

- If it is possible to identify and understand student issues of expectation, what strategies might staff employ to ease the transition between pre-HE and HE, whilst maintaining the integrity of HE practices? And, therefore, can PDP assist in this transition?
- How do we enable students to seek and find relevance for PDP according to their discipline? This question assumes a flexible programme that embraces reflective practice at its heart at level one.

Keywords

Art and design PDP, discourse of PDP, embedding PDP, engaging, PDP, PDP and reflection, PDP expectation, personal development planning, problems with PDP, student voice.

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EDUCATING TEXTILE DESIGNERS

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Abstract

Design in the modern world is subject to constant change due to the pressures of globalisation, the possibilities offered by new technologies, the demands of ageing populations and the need for sustainable development. Institutions of higher education and design educators need to react to this change, to adopt new teaching methods and styles and to respond to the pressing issues for active designers. This paper addresses thoughts and experiences on design/textile-design education, the results from the adaptation of technologically oriented education, the collaboration of design education with design professionals, and the pedagogical practices in the new European multicultural classroom.

Questions

- Are design/textile-design pedagogical practices facing the influence of globalisation, the results from the adaptation of technology in production systems, and the demands of multilingual/multicultural design students?
- What should be the requirements and the quality of the people involved in the design education process, and how can these be assured?
- How can design educators connect theoretical knowledge and creative practice with the professional sphere, the entrepreneurial issues and the requirements of the creative industries, so that design students can be ready for the reality of their profession?

Keywords

Autonomous learning, design knowledge transfer, design teaching and professional practice, globalisation of design education, learning styles, teaching aims/approaches, professional practice and design curricula, technologically oriented education, textile design education

Introduction

Design is visual and conscious process, carried out by synthesising visual, aesthetic and applied means. Design is also planning on a large or small scale. Many professional design activities involve planning and executing of small things, while others require planning on such a large scale that the process involves designers from different disciplines. The advancement of technology, the rapid changes, the increased complexity of today's world, the economic imperatives and globalisation have brought dramatic transformations in the practice of design profession, its methods and requirements, putting new demands on the design education system, too (Panfil, Wilson, 1997).

In parallel, globalisation has stimulated contemporary professional creativity in the design field, by providing a suitable forum for the exchange of information and by presenting new challenges, experiences, design diversity and development. Designers are asked more and more often to provide improvement of design effectiveness, in order to achieve sustainable business success. A designer is increasingly perceived and expected to be the one who 'adds value to projects and products'. There is no doubt that skilled designers are able to add considerable value to products and projects and this is exactly what industry demands, but are they skilled enough to meet the challenge? Research data and the design industry have proved that many are not, due to the lack of adequate applied education.

Textile designers, in order to be able to face professional challenges, should be properly qualified by their education. The reality is that years of practical training are required after university graduation until they are able to stand on their feet as professionals. There has been generally a growing awareness of the necessity to improve the preparation

of textile students for productive functioning in their continually changing and highly demanding professional environment. In confronting this challenge it is necessary to consider the complexity of the education system and the multitude of problems that must be addressed. Traditional textile-design education has very little theoretical/analytical content. This definitely affects textile-design research but also practice. Design education can be considered as the transmission of knowledge, aiming to facilitate students' autonomous learning, self-expression and professionalisation. Quite often the textile industry complains about the lack of preparation of graduates for the practice of their profession. Besides the obvious mismatch of what textile-design education provides and what the profession requires, there's also a question of whether professionals and education are communicating sufficiently well.

Textile design educators

Design academics normally spend four to five years for their bachelor degree, one to two for their Masters and, in order to be eligible for an academic post, about four years on a PHD. That makes an average of 10 to 11 years within the confines of the university world. But what professional experience do they have and how can they communicate professional issues to their design students of any discipline? Or how can they communicate sufficiently well with the textile-design industry when they possibly never had any contact with any industry? Textiles teaching could have been much more fruitful and closer to what students and professionals require and the industry demands, if textile-design education had adapted a pre-requirement for all teachers: to spend a considerable period in the textile-design profession before entering the academic field. Some universities' curricula include design students' practical training of an average of three to six months. But how effective can this be without the reality and the experiences of the real textile profession that they need and want to learn from their instructors that quite often cannot offer? Educators' personal field experiences, positive or negative, can improve their major educational goals and teaching/learning strategies. Some European governmental universities have adapted as pre-requisite for lecturers with tenure, two years of professional practice, but is this enough? What is more, in many cases, and after gaining a lecturer post, many academics are not permitted to continue working as freelance designers, at least legally! So after some years they have become cut off from the current textile-design business.

Recently we have experienced a continuous discussion on theoretical issues and philosophy of design, but not enough on the practice of design. Design professors may be experts on theoretical issues and problem-solving theories, but little attention has been paid to the practical side of design. Maybe it is time to start talking how design should be practised and how design graduates can be not only good theoreticians, but also good practitioners.

Design teaching and learning

Having this in mind, an experiment on textile design teaching/learning was contacted at the Technological Educational Institute of Athens. The aim was to identify pathways in order to offer an up-to-date textile-design education adapted to the regional professional requirements.

A fundamental issue was to identify how textile-design students learn best. Learning cultures vary greatly. The usual way in the design field is the individual, studio-based culture. Textile learners prefer a more practical, visual, approach - they are 'visual thinkers'. They appreciate materials, which are well conceived visually, but they can be critical or dismissive of those, which may not meet their aesthetic preferences. They also respond well to materials or activities that provide them with the stimulus to create something. The occurrence of dyslexia, or other academic learning difficulties do not seem to affect the study of art and design.

The results from interviewed textile-design students on their best ways of learning, pointed towards the following processes being involved in an overlapping way. Wanting to learn - this is a highly important parameter for effective learning, since all interviewed students placed emphasis on it. Also learning by doing, learning from feedback and digesting learning materials. Further questions about the place and the time of best learning, revealed that most students considered they learn best at their own pace, times and places, often with other people around, especially fellow-learners, and definitely when they feel in control of their learning (Driscoll, 2000).

Although in the design field most learning happens 'independently', this does not undermine the

EXAMPLES FROM THE COLLABORATION OF TEI TEXTILE DESIGN STUDIO WITH THE LOCAL DESIGN-PRODUCTION SYSTEM:

LEFT TO RIGHT: FIG.1: THEATRICAL COSTUME, DESIGNED BY DEGREE STUDENT FOR LOCAL THEATRE BUSINESS.

FIG. 2-3: STUDENT STUDY ON FIBRE LAMPSHADES AND ITS PRODUCTION BY A LOCAL CO-OPERATIVE.
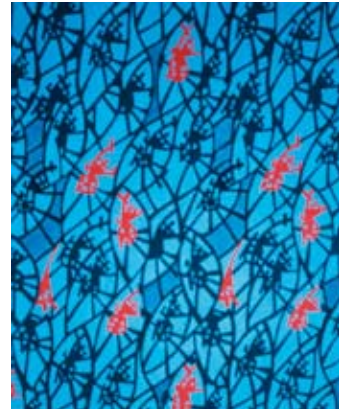
role of the instructor. Instructors help learning to take place by providing learners with resource material and chances to test learning, giving feedback on their progress and helping them to make sense of what they have learned. Independent learning should rely on practice that is assisted by instructors' feedback on students' progress.

Another important part of textile-design learning is resource-based. Learning resources take many forms including human resources and information-type resources (Sandholtz, Rignstaff and Dwyer, 1998). It is important to offer students sufficient motivation to learn. Parameters that assist successful learning are attractive, interesting and effective learning resource materials, carefully chosen tasks, exercises linked to professionals and industry, and opportunities to reflect on what they have learned. Traditionally learning resources used to be paper-based. Currently the range is extended (Rockman, 2004), and includes interactive computer-based packages and communication media (Honey, Culp and Carrigg, 1999). Important learning outcomes can be achieved through games, simulations and role-play exercises, due to their attractiveness among youngsters

(Harrington, 1997).

The increasing diversity of the population in universities around the world creates new demands and complexities, but it also provides new opportunities. It demands changes in the delivering of design curricula (Rhoades and Sweeney, 2004). Students from various cultural backgrounds often make suggestions about ways lecturers might make the climate of classes more comfortable, while they appreciate their cultural group being recognised and valued (Perivoliotis, 2001). Keeping in mind all the aforementioned factors, textile-design educators can make both local students and students from different countries and cultures feel welcome and comfortable in their classroom, increasing their chances for professional success.

Conclusions

After four years of research and experimentation, the following outcomes were derived:

Textile-design curricula should mix equally practical knowledge of the field with theoretical design, stimulating professional creativity (Dasgupta, 1996), including additional issues from other disciplines and

research activities, but always concentrating on the learning side of the teaching-learning equation. They should adopt curriculum flexibility, depending on what the newest global and technological issues are, responding to the shifts of industry, showing students how to adapt to real world demands, preparing them for the reality of their profession.

Whilst learning design students should explore real design issues, and not only theoretical ones. Academic research should also focus on ways that actually improve students' creativity. Educators' efforts should be on finding projects for effective products, linked with the local textile industry or the design production system, offering future textile-designers possibilities of work placement. **SEE FIGS. 1-3**

The quality of the people involved in the education process, as well as practical and theoretical knowledge, creative practice, professional concerns and entrepreneurial issues will be successfully addressed to design students when structural and legal constraints for designers working in academia, regarding professional practice, disappear.

Sensibility, creativity, personality and cultural heritages play an important role in the textile-design process and should be valued. All students, local, multilingual, multicultural, from minorities, with learning disabilities, should equally participate in projects and research activities with freedom of design expression. Educators must demonstrate in their own behaviours that all students in the group are valued, and take a firm stand to ensure that students behave in a similar way.

Design paradigms, production issues and information should continually be piled supplied and offered additionally, via the institution website, providing possibilities for e-learning and distance learning, offering additional access to design issues from students' home bases and a suitable forum for the exchange of textile-design knowledge and experiences (Harrison and Bergen, 2000).

The great thing about design education is that it's fundamentally for and about people. This is why no neat prescriptive system can ever hope to cope with all the complexities of course development. Far more important than any system is the quality of the people involved in the education process. Persons of talent and commitment can overcome the deficiencies of a system, but no system can cover up the deficiencies of uninterested and uncommitted educators.

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OF CABBAGES, KINGS AND OTHER THINGS: THEORETICAL FRAMEWORKS IN STUDIO PRACTICE

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Abstract

Students enrol on arts courses to 'do art' and many feel that the core historical, contextual and theoretical modules of the course are at best a necessary evil and at worst irrelevant. This trigger paper invites discussion of an ongoing Theory in Practice research project that investigates the context of teaching theory on art and design courses. The paper explores potential methodologies which act to breakdown barriers to learning and discusses the ways in which theory and critical thinking can be embedded within studio practice in relevant and engaging ways.

Questions

- Are the methodologies discussed in the paper appropriate across the arts curriculum?
- Taking into consideration the 'vocationalisation' of the art and design curriculum and the impact this has on the perception of the artist/designer, does the emphasis on didactical technical skills, especially at level 1, discourage critical thinking?
- Why are students generally unable to recognise their own subjective experience within a wider social, political and cultural framework?

Keywords

contextual studies, critical thinking, drawing, theory, practice, innovation, motivation.

Introduction

This paper discusses an ongoing research project entitled Theory in Practice, funded through the University of Plymouth Fellowship scheme. The research focuses on the FdA Graphic Design and FdA Multimedia/Animation courses at Cornwall College, but has broader implications across the visual arts curriculum.

The research project arose from a shared concern that the teaching of contextual/theoretical frameworks, within the visual arts curriculum, has suffered from being regarded, by students, as largely irrelevant to the teaching of studio-based practice. The initial, perceived, incongruity found within the literal allusion "cabbages and kings" (Why would Lewis Carroll's Walrus and Carpenter want to discuss such different items in the same conversation?) formed an appropriate expression of the proposed question: why are students generally unable to recognise their own subjective experience within a wider social, political and cultural framework?

Rationale

The core theoretical/contextual units on practice-based courses present a specific set of challenges for both teachers and learners. Contextual knowledge can be broadly defined as a process of embedding a relevant body of aesthetics and appropriate historical/contemporary exemplary material, activities and interests into a framework of studio practice. Initial quantitative and qualitative research in our department revealed that although there was general agreement amongst lecturers about contextual module content, method of delivery and its direct relevance to practical art and design assignment briefs, this view was not shared by the students who generally regard contextual studies as a distinctly separate entity, which has little relevance to their creative practice. This division is reinforced by the separation of staff working on either theory or practice modules and, moreover, compounded by the disjoining of 'physical' space in terms of the lecture theatre/studio separation.

Students, after all, enrol on arts courses to 'do art' and many feel that the core historical, contextual and theoretical modules of the course are at best a necessary evil and at worst irrelevant (Edexcel, 2004). There are a number of reasons for a negative perception among some students coming to the subject, the main one being that the subject involves academic written work such as projects and extended essays. Art and design history lecturers are often perceived as being academics and therefore distanced from practical contexts. This, it must be said, is frequently compounded by pedantic delivery and total reliance on a 'chalk and talk' style which reinforces the division between theory and practice. In addition, arts courses traditionally contain a higher than average number of students with dyslexia type learning difficulties who find engaging with text presents a specific challenge (Wolff and Lundberg, 2002).

Government initiatives encouraging greater inclusion mean that the visual arts curriculum itself is becoming a process that aims to 'demystify' the subject and establish the creative process as a more accessible vocational activity. This repositions the studio-based learner, away from the rather elitist tradition of autonomous 'talented' students having a very individual experience into a vocational practitioner plus critical thinker.

The aim of 'theory in practice' is to initiate creative and innovative teaching strategies to enhance the quality of learning and teaching at an individual and subject level by synthesising contextual and practical elements in a relevant and meaningful way. The research project will work towards developing an ethos whereby contextual knowledge becomes embedded in practice rather than sitting rather uneasily alongside it; creating a dialogic relationship between theory and practice. We believe that the separation of theory from practice does not enable students to clearly position their own interests and values in relation to the past and present, therefore in context. This we believe results in superficial rather than deep learning and does not integrate the necessary skills for ongoing personal and professional development which are key features of the FdA courses we are involved with.

In its broadest sense this research project aims to motivate students to understand and take ownership of their own contexts within a wider framework of art and design education. Through our own reflective practice we have discovered that many students become demotivated and are unable to appreciate the relevance of the work they have produced because they are unable to 'contextualise'. Once they gain the ability to 'contextualise', however, they become more motivated as they are able to position the work into a meaningful and useful framework that can be further developed into a series of achievable outcomes or goals. This we have found is most effective when experiential learning takes place through a range of practice-based tasks that fully integrate theory. Moreover, by encouraging students to evaluate their own working practices within an analytical context enables them to recognise their own subjectivity and is a valuable process which can be placed within a wider theoretical framework: that is. how ideas and concepts may be further developed (ieusing methods, concepts and theories in new situations)

Through a dynamic interaction between teaching and learning, the project explores not only how theory can inform practice but also how practice can inform theory, and works towards developing a shared vocabulary. In order to achieve this, students necessarily have a significant input, with the research team learning from students and students' individual learning styles as part of "an ongoing social process comprised of the interactions of students, teachers, knowledge and milieu" (Cornbleth, 1990, p.5).

Addressing the physical and conceptual separation of theory and practice

Several immediate and quickly implemented solutions presented themselves to addressing the problem of the physical and conceptual separation of theory and practice:

• The lecture theatre/studio separation which encourages the division of teaching methodologies into 'chalk and talk' and 'hands on' was addressed by working in the studios with the students when timetabling permitted. This not only situated students in a familiar learning environment but also provided additional opportunities for developing quick practical tasks to make theoretical concepts less abstract by enabling students to use skills already gained.

- The conceptual separation of theory and practice was addressed by working closely with studio staff to map the critical/contextual elements of the curriculum onto studio projects and making this cross-fertilisation evident by referencing them on assignment briefs.

- The perceived separation of theory from 'life' was addressed by introducing concepts using familiar objects rather than initially focusing on design 'classics' which are often divorced from student experience. Thus recognising and valuing student subjectivity within the context of theoretical frameworks.

Of cabbages and chairs

The following extracts are from a series of studio-based lectures, which adapt the pedagogic principles of object-and-material orientated classroom learning. The aims and objectives of these sessions were defined by the recognition of, and building upon the past achievements (what is known) of students by providing 'familiar' pedagogical working methodologies (such as clay, domestic objects, food) and expanding those methods into unfamiliar processes (what is not known) whilst acknowledging the importance of independent student thinking and organisation. We wanted to include an element of synthesis into the student experience, as we considered this to an important skill for students to be able to develop: ie. the ability to synthesise their own subjective experience into a wider social and cultural framework. In addition we realised that students do not necessarily understand cognitive processes, therefore as part of our introduction to the assignment briefs we demonstrated to students how each stage related to Bloom's taxonomy in order to develop students' knowledge of how learning takes place. We felt that recognising, acknowledging and building upon students' previous learning/experiences was central to the process and this was incorporated into the workshops and assignments. We also found that once students became aware that there are different learning and teaching styles, and that there was no 'right' way to learn, their confidence increased. For many of our students, who have entered higher education through Widening Participation (Kennedy, 2003, p.2), this was particularly valuable since it enabled them to recognise their skills and locate them within a relevant educational framework.

Of cabbages

Students were required to produce a number of simple three-second drawings in which they responded, visually, to a selection of verbal/written prompts (boat, car, tree etc) and then asked to compose a written response to his/her direct experience (as opposed to description) of a 'group cabbage' (a real/tangible object). The completed drawings demonstrated an identikit response and served to articulate the nature and function of icon (as suggested by Pierce in direct contrast to the latter exercise, which evoked, from the students a diverse number of highly individualistic accounts of their experience of the object: source of nutrition, heath, vitality and sex – memories of bad school meals, shopping – soil, blood, work – cutting, chopping – accidental symbols – metaphors – formal resemblance such as brains etc.

This exercise encouraged conversation, debate and argument about themes that linked to areas of life that students felt were important: identity, memory and sexuality. The transformation from object (common vegetable) to an animated source of expression to which subjective experience could be inscribed, usefully illustrated the polysemic nature of advertising images. In addition, this session provoked discussion upon the arbitrary relationship between the signifier and the signified as set out by Saussure.

Of chairs

Using the subject of a chair as a focus for investigative processes other 'lectures' begin with a familiar and 'safe' object, so to form a 'springboard' into the exploration of theoretical contexts. Learners were encouraged to think of the chair not as a passive object, but one that is active in constituting part of an overall theme, ritual, mood or aesthetic within a variety of cultures: building upon the ideas and concepts generated by the student discussion (place of rest - plain/decorated - individual/mass produced - comfort vs status - ritual/symbolic eg throne, birthing chair; nursery chair (small); high chair; singular (throne); plural (deckchairs – auditorium, etc) – poverty/ wealth – cheap/expensive). Students were then asked to construct a clay model chair which formed an appropriate physical, emotional or conceptual representation of themselves (therefore a self portrait). The completed models provided a valuable vista, from which students were able to explore their own

subjectivity (and that of other group members) in relation to the cultural artifacts that they had produced. The resulting curiosity, generated by this exercise (making and thinking – psychomotor and cognition), allowed students to 'naturally' locate, within context, the theoretical and cultural processes of constructing and agreeing/fixing 'meaning' in language.

The 'solidity' of the (concrete) conceptual experience, of both chair and cabbage, is found within the learners themselves: who demonstrated an ability to clearly call upon these exercises at later stages in the learning process. Thus, the deep learning that has taken place becomes self-evident, through the students' ability to use (take ownership) of the subjective 'encounter'. This meshing of experience into conceptual frameworks, which initially emphasises subjective experience over academic rigour, is a useful model. Students become more confident through expressing opinions and feelings about familiar objects and this can be later 'channelled' into an appropriate academic medium.

Of water and organisations

Graphic designers, in particular, frequently have to produce designs or logos that need to represent two or more seemingly unrelated concepts (such as cabbages and kings) and the process of synthesis that this activity necessitates also holds true when writing comparative essays. Prior to setting a formal comparative essay we set the students an assignment to create an A1-size conceptual map using the concrete noun 'water' and the abstract concept of 'organisation'. Students then undertook a process of evaluation (what is known) for the terms individually using single words or phrases, and then explored through the generation of keywords and themes the relationship between them (what is not known). This peer- and tutor-assessed exercise validates students' prior knowledge, whilst at the same time enabling them to develop new knowledge through a process of synthesis. This is a particularly useful exercise for graphics students who need to work with text and image in a very symbiotic way and it provides a concrete methodological introduction to the skills necessary for writing a comparative essay.

Conclusions

In conclusion, we have sought to create tangible links between theory and studio modules by developing integrated projects and through discussions between tutors to present a united front and cross reference theory and practice. This negotiation between studio and academic tutors, to map contextual lectures onto practical content, has made the connections more obvious to the students and is reaffirmed through the assignment briefs and the tutor's schemes of work. In the future we plan to set practical assignments for research modules with studio and theory staff co-assessing. Learners, we have discovered, expect a 'top down' dissemination of knowledge from master/ teacher to student through a schematic process of 'fixing' and recalling dates, names and art movements as appropriate to their chosen subject specialism. This expectation not only compounds the separation between theory and practice by students but also maintains divisions between disciplines, ignoring the wider cultural context. In challenging traditional barriers and hierarchies we realise that we are also challenging both students and ourselves: we are all out of the comfort zone! Therefore we are undertaking a process of ongoing detailed feedback from students combined with personal reflection about assignments and more formal lecture sessions. Initial feedback is encouraging.

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INTRODUCTION: WORKSHOPS AND SHOWCASES

David Clews and Anne Boddington

To complement the sessions where delegates have an opportunity to discuss trigger papers submitted by colleagues, the Teachers' Academy is also offering twelve workshops based on a wide range of themes and ideas. Workshops are interactive sessions, running in 3 strands, enabling delegates to learn new techniques and approaches to learning and teaching in art, design and media in higher education. Workshop presenters have been selected to offer the broadest range of activities covering the breadth of subjects in the field.

Showcases, running after trigger paper sessions and workshops on the first day of the Teachers' Academy will demonstrate some of the wide range of projects and innovations being brought to bear on Higher Arts Education across Europe.

Workshops

In "Academic Writing and Performing Arts Practice", (session A4), Mark Evans examines teaching practices that make use of reflective writing and reflective practice to enhance creativity and deep learning. This workshops considers "another kind of writing" focusing on the generation of knowledge and understanding, rather that its presentation as "finished" academic writing.

"Drawing: An Anachronistic Practice or Significant Tool for Learning" (session A7), a workshop delivered by Carolyn Bew and Linda Wheeler also examines the privileged position of academic writing in learning. This workshop emerges out of research demonstrating that gesture and drawing developed into the first written representation of speech. The workshop explores how increased use of drawing in support of the written word can enhance learning.

In "Learning by Demonstration" (session A5), Alma Boyes, Cynthia Cousens and Helen Stuart invite delegates to join them in the Faculty of Arts

and Architecture Ceramics and Metals Workshop to explore the role demonstration, particularly in materials techniques, plays in learning. This workshop is based on the Teaching and Learning Through Practice research project that is supported by the Centre for Excellence in Teaching and Learning Through Design (CETLD).

There are two workshops based around the theme of collaboration and team working. In the first, "Developing and Assessing Group Processes and Skills" (session A6), Cordelia Bryan offers delegates a chance to experience how students acquire collaborative skills and engage in processes intended to raise the "group performance grade". Bryan's model for enhancing group work performance has been used within art and design and other disciplines and the workshop will explore how this model might be adapted to for use within specific art and design contexts. In the second workshop on the theme of collaboration; "LEGO: Serious Play in Art, Design and Media Higher Education" (session C6), Stuart Nolan takes techniques of Serious Play used in global enterprises, including: Google, the International Red Cross and NASA, to enhance business performance and explores how it is being harnessed in learning and teaching. Pedagogic case studies from, amongst others, the National Endowment for Science, Technology and the Arts (NESTA), the Helsinki University of Technology and Bournemouth Media School, will provide participants with the background to their own serious play.

In a related project, Margo Blythman, Bernadette Blair and Susan Orr offer a workshop (session A8) based on recent studies undertaken by them across several departments in UK higher education institutions. Their study examines the use of studio crits, juries or presentations as learning situations and, in particular how feedback is given and recieved. Crits

are commonly used across all arts, design and media and the presenters note that what is happening in them is "perceived differently by students and staff". This workshop will offer participants an opportunity to explore how the effectiveness of the crit will be enhanced through the application of problem-based learning processes.

Improvisation is the theme in two workshops. In these, improvisation is explored through the lens of the performing arts. In "Acting with the Inner Partner" (session B4), Alexander Komlosi focuses on a technique for acting and dramatic play. This "solo improvisation discipline… nurtures the dynamics of creative, disciplined, playful and spontaneous acting" and develops the "psychophysical fitness needed to act creatively in front of others". In "How to Develop Creative Activity" (session B7), Anne-Liis Poll and Anto Pett present an "exercise system for developing improvisation abilities" for musicians. The system is intended for young musicians who are just starting to learn an instrument but in this workshop will focus on voice improvisation. Although these workshops emerge out of acting and music they are intended to benefit all those who have to work in front of others in a creative way.

Sustainability has grown over the last decade to become a key issue in art and design practices and demands are placed on educators to consider how issues of sustainability will be embedded in the curriculum. In "The Sustainability Landscape in Art and Design Education" workshop (session B5), Karin Jaschke and Alistair Fuad-Luke invite art and design educators and practitioners to "give form" to the sustainability landscape and identify issues that are driving the current debates. This workshop emerges out of the EU funded DEEDs project (Design, Education, Sustainability) based in the University of Brighton School of Architecture and Design.

Creativity and research have both assumed a central position in discussions in creative and performing arts, design and media higher education. In particular the question of how creativity can be learned, how research and learning are linked in

academic departments and how creativity at the core of arts and design learning and practice relates to creativity cited as a driver of economic growth. In "Linking Learning to Research in the Creative Disciplines" (session B6), Naren Barfield, Anke Coumans and Klaus Jung invite delegates to consider and explore these questions.

Forms of performance are considered in two workshops focusing on the formation and understanding of architectural space. In "The Skeleton" (session C4), Brian Shaw invites participants to consider how their own body's structure can be used to support "inquiry into architectural space". This workshop uses physical movement to allow participants to create short improvisations to "merge structure and space". In "Material Scripts and Shifting Sites of the Performative" (session C5), Oren Lieberman offers a workshop "incorporating explicit performative spatial practices". These are used by students to "conflate physical and learning space, opening up potential for creativity within a participative action research". Delegates will be able to experiment with their own performative "spatial productions" and experience how these are used by students to develop their understanding of spatial complexity.

In the "Content Analysis of Imagery" (session C7), Margaret Sullivan examines how meaning is embedded in images and how meaning is contingent. Different contexts, for example, advertising or political campaigns change meaning. The workshop uses interactive content analysis enabling participants to question image meaning. Sample questions are: "what is the apparent meaning of an image in context and how is this revealed to the observer?" The workshop will also examine how varying content, for example, alternating the image subject's gender or replacing able persons with a disabled person changes image meaning. The workshop focuses on how techniques of content analysis are developed to assist students in examining "meaningfulness in public imagery".

Workshop presenters have been selected to offer the broadest range of activities covering the breadth of subjects in the field

Showcases

Showcases are intended to be informal and an opportunity for delegates to view a range of projects and learning and teaching developments in creative and performing arts, design and media higher education. The Teachers' Academy offers a wide range of showcases by artists, designers and performers exploring interdisciplinary and trans-national practice. Many of the showcases are examining how the work of those working in Higher Arts Education are harnessing new technologies to extend their teaching, practice and learning.

In "Resistive Spaces", Mette Ramsgard Thomsen will discuss how architectural design practice is being changed by new digital tools. She presents a series of cross disciplinary projects linking the fields of architecture, computer science, dance and textile design and discusses an architecture shaped through movement. Fusing the interfaced with the material she seeks new contexts for conceiving a responsive architecture that acts on and reacts to changes within its internal and external contexts. In an exploratory demonstration of projects such as "Dance-architecture Sea Unsea", shown at the Dance Umbrella Festival in October 2006 and "Textile-architectures, *Vivisection* and *Strange Metabolisms*", (January 2007, Danmarks Design School and University of Brighton) she will seek to bring together questions of spatial production, intelligent programming, interfacing and knitting.

Continuing in the theme of working with new digital technologies, in "The Virtual Residency", Claudia Brieske shows how an internet project is transcending national and cultural boundaries to create a live art project exposing the "political, social and cultural reality of different European cities. Dejan Grba's "Mutant Zombies Project" uses morphing software to "make hybrid portraits with distinctive qualities of personality and character". Finally, Rebecca Reynolds and Catherine Speight showcase "iGuides from Street Access". This project, based at London's Victoria and Albert Museum forms part of the collaborative work between the Museum and the University of Brighton Faculty of Art and Architecture Centre for Excellence in Teaching and Learning Through Design (CETLD) and uses Personal Digital Assistants (PDAs) to access "gallery-based trails exploring the Museum's collections".

Cecily Charlotte Cheo's project: "Renegotiating the Boundaries: the teaching of visual art in Singapore Schools" explores dominant teacher-centred, exam oriented procedures in schools and shows how these have been reformed by the project to promote "student-centredness, risk-taking, fun, cultural awareness, enquiry-oriented and independent learning." The project provides opportunities for student-teachers to design and conduct workshops for schools and to promote these in video and photographic documentation.

Interdisciplinary working and projects are a key theme of the Teachers' Academy. In what Elvira Hufschmidt calls "an interdisciplinary transformational process", Stille Post! Chinese Whispers! 11 Disciplines, 22 Weeks, 33 Works of Art, eleven artists and academics used the rules of a traditional childrens' game to develop a "teaching model to involve art students in new forms of interdisciplinary, cross-border and interventional art work". In a second interdisciplinary project Chris Rose and Inam Haq looked at the design of chairs and human biomechanics. Design students worked with doctors and researchers in the Biomechanics Research Laboratory to synthesise "subjective aesthetics" with "rational analysis of data" in the design of chairs. Finally Mine Kaylan, in "Education and the Chair" undertakes "a critique of cross-disciplinary and process-based practice". This showcase is an attempt at a "live documentary" of present-day creative education models.

The "inter}artes" project picks up the transnational theme. This project focussed on artistic traditions and traces the aesthetic modes, creative practices, cultural histories and artistic skills of Europeans. "Tradition of the New" studied the interconnection between arts practice and society within student-centred learning and the creative and cultural sector and intercultural economies of Europe. Snejina Tankovska, the Project Leader for "Tradition of the New" presents a DVD which shows the outcomes of using dynamic examples of tradition and innovation in European Higher Arts Education. The presentation includes contributions from Bulgaria, France, Greece, Lithuania, Turkey, Iceland, Serbia & Montenegro, and Ireland.

Suzie Hanna's animations are between 30 seconds to one minute long and are made by students as part of a project designed to balance their creative ambition and the needs of clients who

The showcases are examining how the work of those working in Higher Arts Education are harnessing new technologies to extend their teaching, practice and learning

commissioned work. The project is a collaboration between undergraduate and masters level students in animation and the BBC. The films are intended to promote a series of BBC TV programmes and encourage film-makers to work creatively but within the frameworks of the commissioners of their work.

The Wunderkammer project was taken as the starting point for Wilemm Vermoere and Wouter Coolen's project to introduce fine arts elements into photography teaching. Like the Wunderkammer, their project aimed to merge the world of facts with the world of imagination. "This meant introducing slowness, a more elaborate search on presentation and discovery process".

Jane Fox and Alice Fox's Access to Arts (a2a) project brings together students with learning disabilities and undergraduate students at the University of Brighton Faculty of Arts and Architecture in a project for the visual arts. This innovative project has led to a Higher Education Funding Council Student Volunteering Opportunity Award. The a2a group has, with the aid of funding from the Arts Council established a2a Rockets. Based at the Phoenix Arts Centre, Brighton, a2a Rockets is an artists group for graduate artists with learning disabilities.

Finally, Daniala Moosman and Mart Jan Zeger will present "Making Theatre with Non-Dramatic Texts". They recently completed a book on the writing/making process of several directors and writers in German, Belgian and Dutch contemporary theatre. Moosman and Zeger will demonstrate how to make theatre with a non-dramatic text that uses no characters of plot.

Showcases will run in the evening of the first day after the formal sessions and during the evening party. Further information on the location and times of showcases will be available at the Teachers' Academy venue.

ACKNOWLEDGEMENTS

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Design

The Teachers' Academy 2007 Website, publicity
materials and the Teachers' Academy book were
designed by compoundEye
www.compoundeyedesign.com