

Pedalling Creativity: a studio-based approach to teaching creative thinking to visual art & design students.

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Author's biography

Donald Welch is a Senior lecturer and Convenor of the Design Department QCA Griffith University. He has ten years professional design experience in UK and Australia and has taught design for twenty years. He has been a consultant to international design company Minale Bryce Design Strategy. Donald developed the course 2545QCA Creative Thinking, launched it in 2003 and has taught it every semester since.

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Abstract

Having been a professional designer for ten years in the UK and Australia, and subsequently teaching the subject of design at Griffith University, I realised that the most important thing I was trying to impart to my students was the means to increase their creativity. Rather than including various creative approaches into assignments as an add-on tool, I came to the conclusion that a holistic approach is essential in the teaching of creative thinking. Instead of a piecemeal approach, I decided to develop a specific course with creative thinking as its focus. This has now been taught every semester since the beginning of 2003.

My initial belief, that the teaching and learning of creative thinking is not easily compartmentalized, has been strengthened through the experience of teaching this course. A reductionist approach may be essential to understanding the parts, but the creative concept can easily exceed the sum of these parts. Consequently, I adopted a generalist approach that incorporates a range of cognitive and behavioural activities which together offer an effective way to tap into individual creativity. One important ingredient is the use of 'Impro' theatre technique to lessen self-awareness, heighten spontaneity and encourage humour.

Every student who completes the course takes with them some practical means of extending their creative output. Throughout the semester every student is physically and mentally engaged in workshop activities that encourage creative output. The course could well be called 'Practical Creativity' since it requires an actual product as the outcome. A limited selection of these 'creative products' will be offered as evidence of the success this process has been.

Like learning to ride a bicycle

Creativity needs exercising. Like learning to ride a bicycle. It can sometimes be painful and sometimes frustrating. Then, after all the trying, quite suddenly you find yourself bicycling without conscious effort. This analogy may be extended to the content. You can be taught how a bicycle functions, and why riders don't fall off so long as they maintain a minimum speed, and how centripetal forces mean you lean into bends, etc. But you can all remember when you first tried to ride—you promptly fell over! Theory is one thing and practice another. A bicycle is an inherently unstable machine that takes you places only through the risky business of pushing off and looking ahead to where you wish to go. And, so far as riding a bike is concerned, anyone may become proficient without learning an iota of theory. This analogy neatly encapsulates my approach to teaching creativity. In reality, I combine theory with practice. But my goal at the end of the course is to have everyone riding unaided—to incorporate what they have learned into their daily lives and to make regular, practical use of it.

Every lesson incorporates hands-on activity as well as discussion/lecture time on what constitutes creative thought. Important concepts such as left and right brain thinking are explored. Inevitably, aspects of consciousness form part of these discussions (eg. Greenfield 2000, 2002), as does what constitutes risk and how to assess it (eg. Fobes 1993), and numerous other topics inherent in creative thinking, many of which will be discussed below. Class exercises include a range of practical activities such as drawing to stimulate right brain activity taken from Betty Edwards's work (Edwards 1989), creative writing, dividing squares of card to produce other shapes (de Bono 1990), and so forth. A variety of equipment is used. For example, with de Bono's squares, scissors and lots of square pieces of card are provided, but no pencils. This forces participants to do something irrevocable, to actually cut into the card. It's risky and there's no going back: you can't unmake a cut. The atmosphere may be supportive but often the exercises, simple as they appear, can be difficult and even confronting to some people. As the course outline states, students undertaking this subject may find their brain hurts!

How it began: Visual rhetoric

Some years ago I worked on the development of a method for the visualization of creative concepts based on rhetoric. Traditional literary approaches were inadequate because I was aiming at a visual rhetoric. The rhetoric of the image, especially in relation to advertising, was highlighted by Barthes (1964). Subsequently, Jacques Durand (1983) proposed a table of rhetorical operations which, upon testing, proved to be more a method of analysis rather than generation (Welch, 1997). Gui Bonsiepe reflecting upon the role of the designer as a creative agent, and especially the role of the graphic designer, proposed a new understanding of this role and suggested that the 'info-designer' produced original work by means of organizing information, in discovering new patterns (Bonsiepe 1965 & 1967). The fresh viewpoint, the change of perspective, the new understanding resulting from changing the point of entry and then reorganising the parts—this insight resonates throughout the work of many others. It also reflects the views of various authors, including Aristotle, over a considerable period of time, that every possible form of persuasive argument has been used and the knack of presenting a fresh argument lies in the novelty of the arrangement of the parts.

The work of Hanno Ehses and Ellen Lupton (1986,1988) appeared to provide a suitable framework on which to base a methodology. I then incorporated this enquiry into the advanced typography course 'Typographic Design 3', using a diagrammatic representation of Aristotle's model of rhetoric to help visualize the rhetorical structure. In fact, I discovered that a purely visual rhetoric was impossible to construct. Inevitably, reliance on the word, on text, was inescapable in contextualising ideas and for providing an essential spark for subsequent visualization. Incidentally, this course has been taught for nearly ten years and has produced some powerful results.

But the primary objective was never fully realized. However, the desire to continue searching for the grail of visual creativity did not leave me. The more I considered the matter the less important the purely visual side became. The essential process was creative thought. Its expression may be anything and a visual product is just one possible. Consequently this led to developing a course specifically constructed to engender creative thinking as such. Naturally, given the institution in which this was being taught, a visual result was almost inevitable.

The structure of rhetoric permeates the approaches offered by various authors who have written about creativity. For example, the 'trigger mechanisms' (Roukes 1988), 'different types of wit' (McAlhone & Stuart 1996) and 'creative jolts' (Landa 1999) lean heavily on the various parts of rhetoric, such as the appeals, figures of speech, etc.

Randomness

John Chris Jones is known for his interest in design systems and his book, *Design Methods*, was long regarded as an authoritative work on the subject (1981). However, he realized the sort of linear representations of the creative process that many of these systems portrayed did not accurately reflect reality. His interest in the apparently random and intuitive aspects of designing as a creative act led him to abandon much of what he had once espoused. He began to believe that a quite different way of approaching creative thinking was needed and so sought alternative pathways. He found that randomness was a powerful element in creativity composition. But randomness had been ignored because it was antithetical to the apparently almost complete control exerted over the design process by the designer. To recognize the power of randomness was to abdicate control of the process and therefore admit to a sort of voluntary professional emasculation—you were no longer a 'real' designer. Jones explored, and taught, various alternative approaches to engendering creativity. For example, he became fascinated by the compositional style adopted by the musician John Cage, best known, at least in some quarters, for his 1952 piano composition '4 Minutes 33 Seconds' in which the pianist plays not one note: the audience hears what is around them, or what they imagine (Jones 1991).

In my undergraduate days I, too, was offered the linear models of 'designing' that Jones eventually rejected. Like him I, too, now find that more randomised and intuitive approaches to designing, and to creative thinking generally, are clearly superior in generating creative ideas. Jones's method of devising different ways of introducing randomness into the creative process has produced some impressive outcomes from my students, especially those majoring in photography.

Edward de Bono is famously remembered for his work on lateral thinking. De Bono provided practical ways to envisage new patterns, of seeing the same thing but from a different point of view, thus offering the possibility of novel outcomes. And this is essentially what so many others provide. For example, the 'Geneplore' model of Finke, Ward and Steven (1992) provides for an original idea to be modified. The use of metaphor is an important factor. The essential point is that, while the elements involved remain the same, by changing your perspective it may be possible to discern a completely new pattern. The introduction of random elements into the process, as espoused by Jones, is one effective means of changing perspective.

Impro

The popularity and success of improvised theatre, or 'Impro', has been largely attributed to Keith Johnstone (1979). Impro forms an important part of the course. A full three-hour session is provided in the third week of the semester. This is a very active session, with the tables and chairs moved to the edges of the room and the floor cleared for action. I have been fortunate to have the impro class taken by Louise Callinan, a practicing impro actor who regularly appears in performances throughout Brisbane with Edge Improv and Gorilla Theatre (Edge Improv 2005).

The importance of this impro activity cannot be over-emphasised. It is wholly inclusive—no one gets to sit on the sidelines. It bonds the group in a mutually supportive and non-threatening manner and creates an atmosphere that encourages immediate responses. The range of activities engenders attentiveness to the reactions and feelings of others, acceptance of others, a reduction of self-conscious embarrassment, and a lot of laughing and general silliness! The willingness of students to participate in these activities always leaves me vaguely surprised. At the end of the session the members of the class always feel very energized and much more comfortable with each other. There is a cathartic quality to this session that stays with the class. It gives everyone the confidence to open up to others a little bit more than they would otherwise have done.

Actual teaching

Teaching uses a large 'grab bag' of lesson 'content', and just before the start of each lesson I put together a lesson plan. This is different from semester to semester. I deliberately put myself through this dreadful hollow-feeling-in-the-pit-of-the-stomach so each lesson is never ever quite the same as any other. I believe that teaching creativity requires a degree of nervous energy and uncertainty—the very essence of the creative act. But, I must admit, it's all a bit nerve-wracking. The course is offered at Queensland College of Art, South Bank campus. Because it is an elective it is composed of a broad mix of students from across disciplines and campuses, and a different mix for every semester.

Structured lessons

Although I have consciously avoided the use of wholly pre-determined lesson plans, some classes are necessarily more structured than others. There are a number of methodological approaches to producing creative outcomes that students are introduced to, and which they then apply to class-based exercises. For example, for the 'Non-specific brief' the class is divided into groups of about three students. Each group is given, at random, an envelope. There is a word or phrase written on this envelope. Before opening the envelope, each group is required to explore all

possible connections of this word or phrase. They are supplied with thesauruses and dictionaries. I have begun to extend this to non-English dictionaries because these can offer some quite unlikely associations. Typically, this activity involves brainstorming, as well as mind-mapping (Buzan, Tony & Barry 2000). Eventually, the groups are asked to open the envelope to find out what is their product or service for which they have been exploring meanings. Each group then provides a strategy for promoting this good or service. Typically this involves identifying the user group/s or target market, producing concepts for a brand name and associated logo, the basis of a promotional/advertising campaign, and perhaps other associated elements.

The feedback from students undertaking this exercise has been consistently positive. They appreciate how fresh and different the outcomes are because their thinking was not initially constrained by a set of defining criteria. That is, instead of so many possibilities being automatically excluded, suddenly anything and everything was potentially possible. Subsequently, I encourage the class to discuss actual briefs for assignments or freelance commissions, and how this technique may be applied to real jobs. It is a matter of reducing what are frequently multi-faceted demands down to a single word or phrase. Surprisingly, this is nearly always possible. (A brilliant example of this thinking was supplied by the UK branding guru Wally Olins who, when invited to crystallize the defining mission of the European Airbus, given all its multifarious and international complexity, produced the answer: 'Kill Boeing' [Olins, 2000]). The next stage requires an ability to step back from the immediacy of tight schedules, limited funding, inhibitions on the use of various materials, or whatever, and simply explore the word or phrase—and to lose oneself in these associations. From this arises all manner of unlikely or bizarre possibilities. It is the quintessential 'What if . . . ?' approach. Only afterwards are the constraints applied—but now the boundaries may have been stretched in a surprising way.

However, essentially this is still using the solution-driven approach to obtain an outcome. Instead of the solution-driven approach, the 'problem-finding' approach may be more productive. An aspect of creative performance that I continue to pursue, but with increasing interest, is the formulation and representation of the 'problem'—what is called problem finding. This includes the identification of new and undefined tasks, and looking at existing problems in a novel way. For example, representing a problem visually rather than verbally may produce an innovative response. It may be that the person who best represents the problem is likely to produce the most creative response (Yashin-Shaw 2001).

Recently I have begun using aspects of the 'Creativity Templates' compiled by Goldenberg & Mazursky to extend the range of what may be considered task-orientated methodologies (Goldenberg & Mazursky 2000). Their models, being directed towards producing concrete outcomes, are appealing to designers and visual artists who perforce deal more with practical realities than with theoretical constructs.

An eclectic and pragmatic approach

There is no single means of engendering creative thought. Furthermore, a method that stimulates creativity in one person may have little effect on another person. Accordingly, since the objective was to make students more creative thinkers, from the outset I took an eclectic and pragmatic approach to both the content and to the teaching of this course. If something was known to work, then I used it. I must

emphasise this point—the course is about learning to be creative. Certainly, questions on the meaning of creativity are raised, but attempting a conclusive answer is not amongst the objectives of the course. A consequence of this approach is that I incorporate material that would not be classified as seriously ‘academic’. For example, one of the texts I refer to is a popularist ‘self-help’ type of book by Paul Arden. In fact, it contains some pithy and accurate observations which reinforce many of the precepts of the course, such as, ‘It’s wrong to be right’ (Arden 2003).

Creativity = Risk

In taking a creative approach you are exposing yourself to risk: risk of failure, risk of humiliation, financial risk, etc. But if you never take a risk you will remain safe, secure and predictable. Von Oech includes some pithy quotes that highlight this factor:

A ship in port is safe, but that’s not what ships are built for
Grace Hopper, Inventor

There’s as much risk in doing nothing as in doing something
Trammell Crow, Real Estate Developer

I wish I’d drunk more champagne
Last words of John Maynard Keynes, Economist (Von Oech, 1986)

Risk-taking, with some understanding of the consequences, is essential for creative work. Accordingly, the first assessment item, which is a seminar presentation, is weighted towards the level of risk exhibited by the students. This does not simply encourage the class to take risks: it demands it of them!

Left brain, right brain and elsewhere

The concept of left and right brain-ness is used to help develop an awareness of thinking patterns. The fundamental idea is well known and is based on the way we use the different hemispheres of our brain for different sorts of thinking. While there is considerable evidence that this is the case, there are also contrary views (McCrone 2000). The polarity inherent in left and right brain ness is reflected in various cultural beliefs such as that of Yin and Yang. The work of Jack Pettigrew (2002) suggests ways of how to become more aware of our own patterns of thinking, and how we may influence these patterns to enhance creative thought. In particular, his work on bi-polar disorder and the way the brain maintains its rhythmical preponderance between ‘left brain’ and ‘right brain’ thinking. The significance of his work is that he suggests means of developing self-awareness of which mode you are in. He has noted how Indian swamis have this ability through practising self-awareness. This mix of neurological, cognitive and ‘alternative medicine’ is probably anathema to highly focused researchers, but I have no qualms in combining a range of elements so long as they help my students enhance their personal creativity. Consequently, ways of developing personal awareness through methods of breathing, based on principles of yoga, are discussed and practiced in class. Some of these exercises may influence mood by altering blood pressure and brain rhythm.

And before you know it, we have again slid across disciplinary boundaries into the region of affect. Our emotions affect our everyday functioning. Hence the concept of 'emotional intelligence'. This offers insights into how we respond to a broad range of stimuli, how we retain information and how this influences future actions (Ciarrochi, Forgas & Mayer 2001). As individuals we have a range of different emotional, physical, and intellectual profiles. These sorts of categories provide the framework for personality tests. Personality tests can help us better understand our own strengths and weaknesses. The Myers Briggs Type Indicator (MBTI), in particular, provides a very interesting 'mirror' of our personality, one that is supportive of individual difference. I mention this because the course 'Creative Thinking' is strongly supportive of individual difference, and consequently I encourage students to explore all possible ways and means of strengthening belief in themselves. Hence mention of the MBTI which, I believe, offers positive and psychologically satisfying support (Myers & Myers 1995).

Assessment

How do you assess creativity? The most useful approach I have found is that proposed by David Best. I came across David Best's article *Can Creativity Be Taught?* many years ago, but I find his observations remain pertinent. In particular, his emphasis on the learning of technique and the need for a product resonates with my own background as a designer. He identifies elements which, together, constitute a framework for understanding creativity as a practical activity.

The possibility of creativity requires the learning of techniques, of objective criteria, and of a foundation from which to be original. . . .

1. The process is necessarily identified by the product.
2. Creativity is not a mental state or activity distinct from the forms in which it could be expressed.
3. Creativity grows out of and therefore depends upon cultural traditions.
4. A necessary condition for creativity is to have acquired the requisite techniques.
5. There are objective criteria for creativity. (Best, 1982:293)

Everyone who has taught in fields which require a creative outcome knows creativity when they see it, but defining it can be tricky. Words may be used to describe outcomes, and of course they are, but expressions of creativity are most clearly understood by practitioners of the particular discipline in which it is occurring, or those with an extensive and deep knowledge of the subject. This is because these are the people who engage with the existing cultural conditions and who have acquired and employ the appropriate techniques in their work, as indeed Best insists upon. And so arise 'objective criteria'. While very similar words are used within different disciplines to define creativity, the ability to judge relies upon considerable in-depth knowledge of the discipline.

There are three assessment items for the course 'Creative Thinking'. The first is a seminar presentation. Students are encouraged to undertake this in groups. This presentation incorporates aspects of creative thinking that appeal to the individual or group, and which they have researched. Evidence of their research is provided in the seminar itself and in the accompanying documentation. The element of risk

represents the single most important criteria for this presentation. The outcome of the seminar should not be wholly predictable, neither should any associated class activities.

The major assessment item I have termed the 'creative product'. This may be produced in any medium, and may even be quite transient, in the form of a performance, for example. Students are urged to go beyond their comfort zone, to push the envelope. And, I'm pleased to note, most do so, to a greater or lesser extent. The outcomes continue to fascinate and amaze me.

The final assessment item is class involvement. This is a self-assessment item.

The essential elements

To be creative requires knowledge of the subject matter. Novel ideas do not simply pop out of a vacuum, but are the result of thinking about the subject over a period of time, consciously or not. Thus a period of gestation is necessary.

All methods of teaching creative thinking include taking a different point of view, of turning the 'problem' on its head, of deliberately applying the absurd. Consequently, playfulness (humour) and associated spontaneity become an essential part of the mix. So, in a simplified form, the 'Ah-hah!' moment of 'pure' intuition may be traced back through a combination of steps:

- Knowledge of subject matter
- Playfulness/ Spontaneity (humour)
- Gestation
- Intuition

The course 2545QCA Creative Thinking has no 'right' or 'wrong' outcomes, just more or less applicable or effective outcomes. The course is not so much about Problem-Solving but rather Solution-Finding. 'Problems' are just so many hurdles to be jumped over, or to be avoided or overcome in some other way, in attempting to reach your goal. And look, you can see it—it's just over there, on the horizon: go for it!

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