

All in the Same Direction, All at the Same Time

An Approach to Enhancing Creativity

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This paper proposes that given today's "wicked" problems (Malhotra, 1997), where there are complex issues with no clear answers, where boundaries are fuzzy and the outcome is usually never known and unexpected, creativity can be enhanced, at appropriate moments, by making modes of thinking explicit. Using a particular heuristic approach known as the Six Thinking Hats (de Bono, 1990), in group critiques and tutorials, students are empowered to suspend judgement at critical moments in a project, and thus, enhance their creativity. Furthermore this approach promotes confidence, openness, and trust such that students speak up more and participate fully, contributing to their peers as well as developing their own ability for self-reflection.

Introduction

You are in your seminar, group critique or discussion with students and you may be asking yourself: Are all the students contributing? Are they keeping to the point? How effective are these occasions in promoting creative thinking and openness?

The 2010 Society for Teaching and Learning in Higher Education conference, *Creative Teaching and Learning: Exploring, Shaping, Knowing*, provided an ideal opportunity to run a concurrent session about a particularly effective approach to structuring group discussions that I have used to encourage creative thinking, inclusivity, and confidence. Using

Edward de Bono's *Six Thinking Hats* (1990), I show how this heuristic method can encourage students to suspend judgement and maintain an openness about a project or problem for as long as possible, thus increasing their creative potential. At the same time, this approach is inclusive, in that it encourages and values everyone's contribution. While my professional context is an art and design school and what is commonly called the 'group critique or crit,' I believe that this approach is pertinent to seminars, problem-based learning situations, and other group environments. As you read, please look for parallels with your own experiences in group discussions,

and consider whether this approach would make a difference for your students.

The Group Critique

This research around the effectiveness of structuring a group critique using de Bono's *Six Thinking Hats* approach (1990) is based on qualitative feedback from a second-year group of BA Graphic Communication students at Cardiff School of Art & Design in Wales.

The group crit is one of the most prevalent methods of formative assessment in art and design education as an opportunity to promote students' creative and critical abilities. As a formative moment, group crits take place at appropriate moments during a project. The typical form of the crit is one where students sit or stand together and listen to a student give a verbal explanation of their work while showing it. Other students and staff then interject with commentary, challenges, questions, or suggestions (Percy, 2004).

Effective formative assessment opportunities, such as the group crit, involve at least some elements of peer- and self-assessment, and it has been argued that self-assessment is more productive and freeing when qualitative peer feedback is part of the process (Boud, 2007). It can help to develop a student's critical awareness and clarity of thought through evaluation and reflection in a supportive environment, where ideas can be tested with tutors and peers, without outside pressures. The sharing of information and critical approaches are also crucial to active participation and to the development of a deep learning approach toward their studio practice.

Barrett (2000), in obtaining lecturers' views on what is a 'good crit,' identified cognitive and affective results as being important: "the student and teacher both learn about the student's work, the student feels heard and empowered, the student is able to return to the work with benefit of a different point of view, the student begins to take the viewer into account in the conception of the work" (p. 8). The students that Barrett surveyed also stressed that a 'good crit' is emotionally positive and supportive, as well as an opportunity to get different points of view and learn something about each others' projects.

This is supported by Danvers who argues "creativity thrives in an environment where the individual feels psychologically and physically comfortable, in an atmosphere of trust, security and openness" (Blythman, Orr, & Blair, 2008, p. 2).

However, while many lecturers consider the group crit as a central method for students to receive critical formative feedback on their work and become autonomous learners, the National Student Survey (UK) consistently reports that students feel they are not getting enough feedback (York, 2010). As Blythman et al. (2008) highlight, this suggests that the crit needs to be re-evaluated in terms of its effectiveness.

Similarly, Jackson (1995) notes that not only the quality of crits but the very practice of a crit can vary considerably, even within a single course. There is ample evidence to suggest that the group crit is not always a place of trust, security, and openness, and my own research supports this/her view. My students, for example, reported:

- *Sometimes everyone else is talking – I don't want to interrupt.*
- *Occasionally there's a lack of wanting to upset.*
- *Sometimes I just can't think of anything.*
- *The tutor or other students get there first.*
- *Sometimes it's hard to get your opinion in unless specifically asked.*
- *Sometimes I don't have the opportunity to speak.*

Furthermore, Percy (2004) argues that the tacit acceptance by staff and students of their unequal relationship has more to do with the nature of the educator/student relationship than the actual design outcome. She suggests that "students who successfully engage in the performance of the crit become a member of the fraternity, but those who cannot find a way of participating become isolated from the discourse (p. 145). Barrett (2000) also gives examples where the power bestowed on the lecturer through this tacit agreement can even breach physical boundaries, such as when a member of staff erases or even tears up a piece of work.

While these are extreme examples, Austerlitz & Ararot (2007), in examining the emotional

responses of Architecture students during and after crits, cite anger at the lecturer and fear of negative responses as frequent emotions which dominate students' attention. Blythman et al. (2008) also point out that lecturers and students hold the view that "some crits do not offer a constructive critique that is well argued. Sometimes feedback is vague or self-absorbed... These comments can leave the student feeling helpless" (p. 7).

Encouraging Convergent and Divergent Thinking

A major purpose of the crit is to encourage creative and critical thinking: divergent and convergent thinking. What is the relationship between these two types of thinking, which are integral to producing a creative outcome? Nickerson (2004) argues that if divergent and convergent thinking are seen as polar opposites, the enhancement of creativity would necessarily involve a decrease in critical thinking, suggesting that the crit cannot fully achieve both aims.

Rather, it is more productive to acknowledge that temporary mindsets may be adopted for specific purposes at different moments. Indeed, being creative requires the ability to think creatively *and* critically, and we can consider them as two sides of the same coin. Common to both types of thinking is the ability to be aware of the potential narrowness of making too early a judgement; while this may require adopting a perceptive rather than judgemental framework in the case of critical thinking, in creative thinking it has more to do with giving free rein to the imagination and of expressing ideas no matter how strange or off-the-wall they may seem.

McAra-McWilliam (2007) argues that art and design education strives to teach students to expand their ability to deal with ambiguity and complexity, as well as to experiment, take risks, and communicate without fear of failure or ridicule. Central to this is the concept of "negative capability," which she argues is "to illuminate our surroundings through refreshed perception and provide a new context for action... to move from 'probability' into 'possibility'" (p. 6).

In meeting this challenge, the potential for

dialogic approaches and understanding is predicated on opportunities for collectivity, which the group crit provides; reciprocity, where staff and students listen to each other, acknowledge ideas, alternative viewpoints, and possibilities; and support, where students articulate ideas freely without fear or embarrassment (Wolfe & Alexander, 2008).

An Heuristic Approach: *Six Thinking Hats*

The belief that creative and critical thinking can be enhanced through training and heuristic tasks has many adherents and sceptics (Sternberg & Lubart, 2004). From my observations of learning, heuristic tasks can be a useful tool for eliminating mental blocks and stimulating and mobilizing resources towards the generation of ideas and new possibilities. They can encourage deferred judgement in which more "complex transformations can occur" (McAra-McWilliam, 2007, p.3).

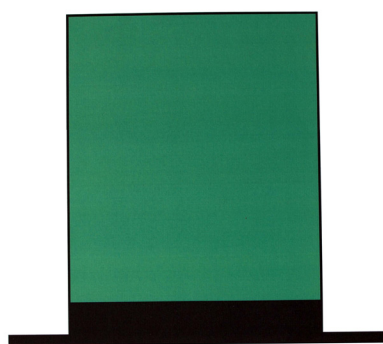
The *Six Thinking Hats* approach is what de Bono (1990) terms "parallel thinking" as opposed to thinking based on analysis, judgement, and argument, which can be termed traditionally as Socratic thinking. He argues that, given the complexity of the world today, we require clear and simple thinking that avoids confusion. Often when we think, "We try to do too much at once. Emotions, information, logic, hope and creativity all crowd in on us" (p. 2). Add to this the emotions and possible tensions within a group, it is unlikely that 'clear and simple thinking' occurs naturally.

De Bono (1990) proposes a heuristic approach that allows individuals within a group to think and speak in one mode at a time, without judgement (hence *parallel thinking*), through role playing or adopting that perspective. Each mode of thinking is represented by a conceptual hat. He explains: "the broad thinking hat role is broken down into six different character roles, represented by six differently coloured thinking hats... You choose which of the six hats to put on at any one moment. You put that hat on and then play the role defined by that hat... When you change thinking hats you have to change roles" (p. 22).

The *Six Thinking Hats* are briefly summarised in Table 1, and represented in Figure 1, by modes of thinking or roles.

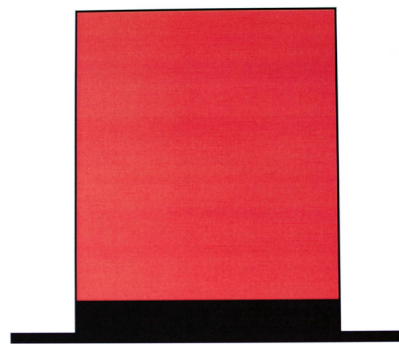
TABLE 1
Six Thinking Hats

White Hat	- pure facts, figures, and information
Red Hat	- emotions and feelings; hunch and intuition
Black Hat	- the devil’s advocate; negative judgement
Yellow Hat	- sunshine, brightness, and optimism; positive and constructive; opportunity
Green Hat	- fertile and creative; movement, provocation, and possibilities
Blue Hat	- cool and controlled; conductor of an orchestra; thinking about thinking



Vegetation
creative thinking
possibilities
hypotheses
new ideas

Take time to be creative and generate new ideas



Fire, warmth
emotion
feelings
intuition
hunches

Take time to listen to your emotions, your intuition

FIGURE 1
Six Thinking Hats

Thus, thinking begins to flow from the *acted parts* rather than from the individual or the self. The individual draws on specific modes of thinking at any one time. Whatever feedback is given is accepted and worthy of being heard and considered. All remains open, *not* judged, and the feedback is depersonalised.

Application of the *Six Thinking Hats* in Group Critiques

While de Bono (1990) asserts the *Six Thinking Hats* can be used at any stage when appropriate, I often choose to use them at an early stage of a project as it generates a lot of openings and alternatives. The *Six Thinking Hats* do not have to be used in any particular order, although I recommend when introducing the approach to students it is useful to start with the White Hat and to finish with the Blue Hat, which addresses the overview and identifies actions. However, as students become more familiar with the *Six Thinking Hats*, they will pick up a hat freely and speak from that Hat, or they will correct themselves and say, “Ah, what I’m saying is Green Hat, not Yellow.” In articulating mindfulness to themselves and others, these are moments that promote a student’s self-reflection and awareness.

Students become trained in and aware of separating emotion from logic and creativity from thinking positively, thus developing the skill of “operacy” in thinking (de Bono, 1990, p. 14). The purpose of the group crit can now be re-characterised as a way of focusing all the students’ attention, all in the same direction, and all at the same time.

A nominated scribe (staff or student) records all the points made under each Hat, and a copy is given to the student whose work is being discussed. After the session, the student evaluates the feedback and acts on it. Indeed, the student may even apply the *Six Thinking Hats* to the outcome of their evaluation – either independently or with a peer. It is a heuristic approach that can be used at any stage.

What the Students Said

New ideas and new ways of looking

Students reported back positively on their experience of using the *Six Thinking Hats*. For those whose work was the subject of the crit, they appreciated it as an opportunity to gain clear, detailed, and relevant feedback, and also to get other points of view they had not considered. This latter point, I think, is one of the main advantages of using the *Six Thinking Hats*. It provides a method for eliciting new perspectives and ideas and reducing prejudice. The method provided an opportunity for students to draw on modes of thinking other than their preferred mode of thinking, for example, positive, negative, or intuitive, which would normally narrow or ‘prejudice’ the possibilities available to them.

Students reported:

- *The Six Hats makes you focus on EVERY pro and con...therefore more feedback at the end.*
- *Another perspective/view always helps because there were points mentioned that hadn’t crossed my mind.*
- *Really helpful to see so many focussed opinions of people.*

Participation

As all comments are worthy of being considered and no judgements are made in this process, students experienced a freedom and security in giving feedback. Students reported that they felt they had a valuable contribution to make without upsetting anyone or constraining anyone in whatever role they had taken on. They reported:

- *(It provided a) new way of doing it – lets us freely give our opinion.*
- *You find out comments from others they might not contribute in a normal session.*
- *It helped me a lot of the way. I appreciate people giving honest opinions especially when they are*

the Black Hat.

- *The Hats remove the ‘Will I insult my friends?’ problem.*

Outcome/Action

Participating in a heuristic task that deliberately promotes the suspension of judgement leaves students with many possibilities and avenues to pursue and evaluate. They reported:

- *Good ideas generated as a result.*
- *I got a plan of what I was going to do and got useful suggestions to my work to make it better.*
- *It opened up my ideas.*

Evaluation

I have found using the *Six Thinking Hats* an extremely useful approach to take at a particular moment in a project – in suspending judgement and for its inclusivity. Student feedback confirms this too. In particular, it provides a way for students to develop mindfulness – an awareness of how they are thinking, which is a valuable skill. There are, however, some considerations that need to be kept in mind: keep the groups small – a maximum four participants, otherwise it becomes a lengthy and overwhelming process; and I ask students to take turns scribing as it develops their listening skills. I do read through what they write and add anything that I consider may have been missed out.

Finally, using the *Six Thinking Hats* is just one approach out of many. Ultimately it is the context and intention of a group discussion that is decisive in the way we structure our teaching, such that the intention is fulfilled. Seminars, group tutorials, and group critiques all have very important parts to play in a student’s educational experience.

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Biography

Annie Grove-White is the Director of Student Development, and a Principal Lecturer of Graphic Communication at the Cardiff School of Art & Design in Wales, UK. She is passionate about helping students to be empowered and enabled in their creative endeavours. Her research interests are particularly in the area of formative assessment, the effectiveness of audio assessment as a formative tool.