

Fear and Learning in the Architectural Crit

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The crit forms the primary narrative through which critical design thinking in architectural education is operationalized. The crit, 'design jury' or 'design review' inhabits a liminal space through which the process of learning architecture and development of professionalism are curated as a rite of passage. This pedagogic process is typically centred on the student presenting design work to a panel of tutor and visiting critics and fellow students. At its best, it can be used to explore ideas and develop understanding through dialogue between all parties. More commonly, it centres around the binary role of tutor 'critiquing' and student 'defending' design work.

This research paper examines the findings of a CEBE (Centre for Education in the Built Environment) funded project in the UK to record and understand current student and staff experiences of the crit process through an online survey. The key findings of the research show that the crit process is one that both students and staff value in principle, but that it often fails to fulfil its potential as a place of constructive critical dialogue. Stress and fear are the most consistent experiences of the majority of students. This paper explores the positive and negative implications of this on student learning.

Keywords: critical dialogue; fear; learning; pedagogy

Introduction

One of the most characteristic pedagogic activities in the education of an architect is the crit, design review or design jury. Typically undertaken at the end (and sometimes mid-point) of a design studio project, the crit is the place where design work is shared, critiqued, reviewed and developed. The format usually involves one or more students presenting their work to a panel of critics who in response raise questions, develop an understanding of the design work and feedback their perspectives of the quality of the work – which aspects of the proposals seem to work well, and what can be done to improve the proposals. The panel of critics are often made up of design tutors and practising architects, with student peers also involved at least in principle.

The crit process operationalizes the concept of critical thinking in relation to design. This development of critical design thinking is one of the key criteria for the education of architects¹: indeed many would argue that critical design thinking is a key threshold concept (Meyer and Land 2003) in ‘becoming an architect’. Since the crit is the principal place in which critical design thinking is made visible and explicitly valued, it has the potential to both facilitate learning a fundamental architectural skill and act as a liminal stage in the passage to becoming an architect.

When viewed in this way, the crit can be seen as a ritual rite of passage; undertaken regularly in a ritual that can be seen to mark a student’s progress from one status (uninitiated or non-architect) to another (someone who thinks/acts like an architect). In the typical format, it is an event of high drama around which students focus their attention in developing work. Often students work late, or all night in preparation and arrive having had little sleep, and in a heightened state of stress and fear. Students pin-up their work and await their turn to present (often observing the crits of others while they wait). When it is their turn, the panel of critics and students arrange themselves around the student presenting. The student begins by presenting their work followed by responses from the critics. The critics each play a role in the event – learned from their experience of passing through the same ritual as students, and honed through their repeated experiences now as the elders of the process. Often their role is to challenge, test and ultimately judge the nature and quality of the work and the responses of the student. Once the process is over (as defined by the critics), the student will often retreat to gather their thoughts, then rejoin the group alongside, or as part of, the panel of critics. The event typically culminates in a celebratory (or commiseratory) social – a trip to the pub or equivalent – and a feeling that another milestone has been passed.

¹ As outlined in the ARB Prescription of Qualifications 2011 and in line with the Mutual Recognition of Professional Qualifications Directive [2005/36/EC], which facilitates the recognition of qualifications across the European Union (ARB 2011:1).

The crit ritual, alongside the design studio pedagogic model, has come to characterize architectural education. However there has been increasing criticism of the process and the way it is undertaken. Over 10 years ago, the authors were involved in an action research project to improve the relationship of architects with clients and users through their education (CUDE² – see Nicol and Pilling 2000). As part of the project we recorded students' experiences of the crit and began to develop alternatives and best practice approaches. The research highlighted problems with the crit model, as well as potential strengths. This part of the project culminated in a student guide to the Crit (2000 and 2007) and a Briefing Guide for CEBE Transactions (2004), both of which were intended to change the ways in which crits were undertaken in order to maximise the potential for student learning, whilst minimising the negative aspects. Since then there have been a number of published research papers suggesting that the process is still perceived as problematic by some tutors and students. Issues raised include the confrontational nature of the event and the impact that this might have on future relationships between architects and their clients and users (Wilkin 2000); the dominating and potentially destructive power relationships inherent in the model (Webster 2007, Till 2003-5; see also Willenbrock 1991); the nature of the event in replicating and legitimizing existing understandings of the production of architecture (Webster 2011 and Till 2003-5); and the particularly negative impact of the process on female and black and minority ethnic students (de Graft-Johnson, Manley and Greed 2003, CABA 2004). However, anecdotal evidence suggests that there have been general changes in the way in which crits are typically run.

This research project sought to provide an updated snapshot of both student and staff experiences of the crit in UK schools of architecture, in order to help understand such experiences and inform ongoing development of the crit and its related processes.

Research Questions and Methods

Questions

The research addressed two key questions:

- What are student and staff experiences of the crit in UK schools of architecture?
- What is the impact of this crit experience on student learning?

Six research objectives are generated from these questions. To identify:

- the typical current format of the crit
- what students and tutors think and feel about the crit
- what students think they learn (and what tutors think students learn) during a crit
- what works well, what is less successful and why this is
- whether or not particular groups experience the crit differently
- what the alternatives could be

Methods

Following a review of the academic literature, the research involved an online survey using Survey Monkey to ask primarily open-ended questions of architecture students (past and present, at all stages of their architectural education) and tutors. The survey included some closed demographics questions alongside questions about participants' experiences of the crit/design review. The demographics questions recorded gender, ethnicity (using categories in line with the Office for National Statistics data categories), and an open-ended question that asked respondents to record any aspects of their identity that they felt had affected their experiences of the crit. Below is a summary of indicative questions related to the crit itself.³

³ which were tailored according to student/tutor respondent and the logic-path format of the online survey.

- What is the first word that comes to mind when you hear the word crit?
- What is the purpose of the crit?
- What is your gender?
- What is your ethnic group?
- Are there any aspects of your identity which you feel have affected your experiences of the crit?
- Can you describe the last crit you were involved in at your school of architecture? (think about how many people are involved, who presents, who questions, what the physical arrangement is)
- How would you describe your experiences of the crit? (What is the atmosphere like? How do you feel? What do you get out of it?)

- Can you describe your best crit experience?
- What made it work well?
- Can you describe your worst crit experience?
- What made it work badly?
- What do you like and dislike about the crit process?
- What do think you learn during a crit?
- What impact does the crit have on the way you think about your architectural education?
- Do you think there is a better alternative to the crit? If so please describe.

⁴ Standing Conference of Heads of Schools of Architecture

⁵ National Architecture Student Association

The survey was piloted at the University of the West of England and then distributed via e-mail to SCHOSA⁴, through the website of ARCHAOS⁵ and through contacts at eleven schools of architecture. Where possible, contacts were asked to invite students to complete the survey in a teaching session. The latter provided the majority of survey responses.

In total 100 responses were collected. Of these 78 were from students and 21 from tutors (1 response did not record either). Student responses were collected from four schools, all outside London and geographically spread across England. The schools represented two pre-1992 and two post-1992 universities. Responses also represented prior experiences at schools in London, Scotland and continental Europe. Staff responses represented a wider range of institutions and also represented a range of different prior experiences nationally and internationally. Overall, 22 schools of architecture were represented either directly or indirectly.

The gender breakdown was very even, with 50 respondents recording themselves as female, and 49 as male (1 respondent skipped the question). The majority (86%) of respondents described themselves as white British, other white or white Irish ethnicity, which is roughly in line with the national average. 15% of respondents described themselves as non-white. Of this group, black or black British – African, Asian or Asian British – Indian, Other Asian backgrounds and mixed – white and black African ethnicities were recorded. The participants also represented a range of year of study, with responses from all year groups at both undergraduate (part 1) and postgraduate (part 2) levels (UG1=17, UG2=10, UG3=9, UG4=5, PG1= 4, PG2=7).

⁶ Word clouds generate a grouping of words 'from text that you provide. The clouds give greater prominence to words that appear more frequently in the source text.' (Feinberg 2009)

Responses from the survey were analysed using open coding to identify key themes and categorise the data. Word clouds⁶ were generated using Wordle (2009) as a way of visually communicating the frequency of word or phrase occurrences in survey responses. Key themes were identified and used to frame a second stage literature review to explore impact on learning of the recorded experiences.

Research Findings

Typical Format

'The tutors sat at the front, but insisted on students leading the proceedings. They did take over later mind...'

Student respondent

According to the survey responses, the typical format described at the start of this paper remains very much the norm. The respondents mostly described a single student presenting for between 5 and 10 minutes, followed by a discussion for 20 minutes to typically take up a total of half an hour per student. Individual students typically present by standing by the work they are describing and talking to a front row of tutor critics, with students normally sitting/standing behind. Feedback is typically given after each presentation and led by the tutor critics. Exceptions to this format described students presenting in sets (of 3 in one case and 5 in another), with feedback after those (3 or 5) presentations; student 'buddies' leading the discussion; half the group presenting and half the group reviewing; group presentations; one student presenting another student's work; changing the physical arrangement by sitting around a table; and finally, the critics having a break after a set of presentations to prepare feedback before the presenters returned and the feedback reported.

The total number of people involved in the typical crit is relatively small. Despite a consistent increase in student numbers in most schools of architecture, all but two respondents described a crit format that involved fewer than 20 students. A couple of enormous events involving around 100 students were described, but these were seen as unusual – held outside, in public and very particular to the project being undertaken. At the other end of the scale there were two student respondents who described their last crit as involving only them presenting to two critics. The average number of students involved was 16 (and only 11 where the two crits involving 100 students are discounted). The most common (mode) number of tutor critics in the most recent crit experience of the respondents was 2. The average (mean) number is a little higher at 2.5, reflecting that in a number of cases there were 3, 4 or even in one case, 5 critics (and 6 critics for the crit involving 100 students).

Where comments were made about the involvement of students in the questions, discussion and feedback, it was mostly to record that student involvement beyond 'listening in' was a rare occurrence. There were, however, some examples of the format being manipulated or changed in

order to encourage or enforce student involvement. Examples included commencing the feedback with questions from students, involving student 'buddies' to record notes on the feedback and lead discussions, and undertaking crits in a cosy space where there were no interruptions (which was seen by the respondent to facilitate an inclusive atmosphere where students became involved in the discussions).

Finally, throughout the survey, there was an assumption that the crit was the place where work was being marked; although in describing the crit format, the issue of assessment or marking was only directly discussed by one respondent (where marking was undertaken during the crit and moderated afterwards).

Impact of the format on learning

'Because of lack of space one of the tutors accidentally stepped on my final model while moving chairs to the next crit.'

Student respondent

Throughout the survey, respondents made clear that the success or failure of the crit as a learning event very much depends upon what might be interpreted as relatively subtle differences in the behaviour of staff and students and differences in the overall format of the process. In particular, crits with too many students, that were poorly managed, or in a poor space with distractions in the background were seen as problematic. One respondent described as a problem not knowing the tutors involved and another described a highly destructive 'star' guest critic as their worst crit experience:

'Famous starchitect brought in to crit 'star' students. Whole school turned out to watch each student be demolished by guest. All other tutors too much in awe of him to step in and support their students.'

Tutor respondent

Conversely, subtle differences in the set up can also have a positive influence. One student respondent described their most recent crit experience:

preparation and critique. The remaining (8) responses were positive, using words like celebration, good fun, and essential.

Twenty seven of the negative responses came from females (54% of the females) and 22 from males (45% of males), which suggests a slight difference in the experience of females compared to males. The difference is slightly more pronounced among the students, where 57% of the female students (23 of the 40 female students) recorded a negative response, whereas 47% of the male students (18 of the 38 male students) recorded a negative response.⁷ 'Being female' was also raised by 7 respondents as an aspect of identity that affected people's experiences of the crit process (the majority of respondents did not think there was any aspect of their identity that affected their experiences of the crit process). In addition being different in other ways was recorded as having an impact, including being older, being a *'foreign student'*, not having family in the business, race, and feeling *'uncomfortable with my group mates'*. A deeper understanding of this gut reaction response to the crit was explored throughout the rest of the survey.

⁷ However, neither Fisher's exact test nor the Chi-square test revealed a statistically significant difference between samples at the 95% confidence level.

Experiences

Tense/Stressful atmosphere

When asked to describe their experiences of the crit the majority of students described a tense, nerve-racking or awkward atmosphere. In some cases this was seen as positive, but for the most part there was a preference for a more laid-back supportive atmosphere, as reflected in the following example:

'The best crit was at first year, when everyone respected your effort and the atmosphere was friendly.'

Student respondent

At its best, the crit was described as a place of enthusiasm and discovery, with an energy or buzz:

[I like] 'the buzz and energy of the day - being able to go around and take in everyone['s] work.'

Student respondent

However, for some respondents the crit was an entirely negative experience. When asked to describe their best experiences of the crit, four of the respondents either felt that a 'best experience' wasn't possible, or

was yet to come. One student respondent recorded that the event itself was an anticlimax and another described it as the '*worst part of the year*'.

Dialogue

There was a consistent emphasis from students on the need for useful feedback and constructive criticism that would help them to progress their work, and a general agreement that the crit works when it is supportive and based on inclusive conversation and dialogue:

'[A] Good crit experience [is] defined by: a sense that people were interested in project presented, that our personal ideas are coming through the presentation; esteem of other students regarding the drawings put on the wall, positive and constructive feedback from tutors. [You] Come out of good crit with confidence and inspiration as to where to take project, what to do next.'

Student respondent

In describing what participants liked about the crit, there was a strong emerging theme of the crit as an opportunity for a shared dialogue, discourse or debate as a tool to advance understanding and propose and test ideas and gather feedback. Respondents described liking the opportunity for feedback, reflection and to respond to questions. They also recorded valuing the opinion of 'fresh eyes' on their work as well as the alternative design approaches suggested by critics. Student involvement was seen as key – both in creating that dialogue as well as making the event a shared experience. Inversely, a lack of constructive criticism and overly negative feedback were the most frequently given descriptions of respondents' worst crit experiences.

Valuing the student's work

There were some responses that suggested the importance of the crit in valuing the work and effort that the students had put in. One student described 'I want to do my work justice', while others suggested that there needs to be more parity between the amount of work undertaken in preparing for the event and the event itself:

'Considering often highly demanding expectations from our projects, I do not feel satisfied with the amount of time lecturers spend with the individual projects. They are always in a rush as well as they do not seem to organise the day.'

Student respondent

The way in which tutors behave during the presentations and critique can have an impact on the way in which students feel their work is being valued:

‘its pretty humiliating standing in front of something you’ve poured hours of work, sleepless nights, stress and effort into and have 2 tutors look at it for 15 minutes after 5 weeks of your work and rip it apart in every aspect they can think of.’

Student respondent

In contrast, students’ experiences are much more positive where they feel their work is valued:

‘I like those who understand that you have worked, and your efforts and are quite polite and always explaining their opinions.’

Student respondent

Differences of perception between students and staff

Among those responses that discussed the crit in positive terms, tutors tended to draw out the potential for the process to be rewarding, celebratory, enjoyable and enriching for all whereas students tended to comment on the benefit of feedback and constructive criticism, suggesting a subtle difference in the way that tutors and students perceive the crit.

Tutors highlighted five key issues that can make the crit process less successful, which can be organised into issues around student behaviour and issues around staff behaviour. Student responses are used to expand on these issues:

Student behaviour

Tutors recorded that student apathy; poor student work; and overly nervous or shy students can all have a negative impact on the success of a crit. The issue of poor student work or presentation, and lack of organisation or preparation was a particularly strong theme – equally raised by students.

Issues which were framed by tutors as student behaviour were framed differently by the students themselves. For example, where tutors

described 'student apathy', students described a lack of student involvement and lack of briefing about the critics and crit process. Where tutors described 'overly nervous or shy students', students described a lack of confidence, lack of sleep, and too much pressure. There was a strong theme that students' tiredness had a negative impact on the crit:

'My worst crit was when I was so tired I had not slept the night before'

Student respondent

'[I] dislike how tired I am and how little I care at that point about my project.'

Student respondent.

In addition, the stressfulness of the situation is seen to reduce the potential for learning. In this vein, one student respondent recorded, *'I am often too nervous to really hear what is said!'*

Tutor behaviour

Staff responses record that tutor behaviour, including a process of confrontation (in particular personal confrontation) and defence and a lack of criticality can reduce the learning potential of the process. One tutor recorded that the crit:

'can be an enriching experience for tutor, guests and students alike but can, in some instances lead to confrontation and defensive responses as a function of staff and student input and responses.'

Students repeat some of these issues and also highlight others. Indeed, the majority of responses describing worst crit experiences referred to tutor behaviour. The tutor behaviour of confrontation and overly negative/unconstructive comments is repeated, with the potential for tutors to be abusive or humiliating each raised by one respondent. In addition, respondents described tutors changing their opinions to fit in with other critics, and presenting opinions with no opportunity for students to respond. Students did not specifically highlight a lack of criticality being an issue, although the notion of misleading tutor feedback was raised: 'they may smile and be encouraging the whole way through, but then you will only receive a 45' Student respondent.

Students also raised the difficulty of presenting work where their views are not in line with those of the tutors. A similar disjunction was raised

by a student who felt that their work was being judged on the graphics and not the design, and by a tutor reflecting on their experiences where surprise issues were raised during the crit that they felt should previously have emerged in the tutorials. Conversely, students highlighted the positive benefit when the tutor ‘gets’ the project. This reflected one tutor’s comment that described the students’ ‘minds-eye’ becoming visible during the process and a general discussion about the value of the crit in being able to really get an in-depth perspective on the student’s work. However, it also suggests a potential reliance on the opinions of the tutors, as one student recorded:

‘your [sic] not thinking or caring about anything other than "is this what the tutor wants?"’

Another two students recorded that the crit is a ‘kind of “shaping” tool’ that teaches you ‘what tutors wants from you to do?’

As an event that is largely perceived by respondents to be about judgement, critique and review, it is notable that the responsibility for this judgement is seen to be held by the tutor. As one student respondent put it, the usefulness of the crit ‘depends so heavily on the calibre of your tutors.’

Worst crit experiences record tutors not being engaged or listening to the student presenting, interrupting the student presentation, patronising the student, showing a lack of respect and a lack of understanding. In particular, the notion of tutors pushing their own (often hidden) agenda – as opposed to understanding the agenda of the student – emerged as a strong theme:

‘My worst crit experience has been when the tutor (in this case a visiting critic) had their own agenda and forced this upon the scheme without taking time to understand the presentation correctly.’

Student respondent

In contrast, respondents valued critics who were polite, recognised the effort they had put in, provided the opportunity for students to defend their ideas and explained their opinions:

‘First of all the tutor was polite. He was not interrupting my presentation what [sic] made it less stressful. He asked well constructed and clear questions and was able to evaluate my answers. He tried to understand the reasoning behind my thinking’

Student respondent.

Key Word(s)	Number of citations
Feedback/advice/constructive criticism/feedback	45
Progress/development/learning/learn	24
Assess/evaluate/judge/mark/test/what people think	21
Discussion/discuss/Share/sharing/new perspective	17
Review/analyse/reflect	15
Ideas/idea	15
Presenting/presentation	12
Improve/refining	9
Understanding	4
Critical thinking	3

majority of respondents the purpose of the crit is to provide feedback, advice or constructive criticism (as reflected in prior comments about successful and positive crit experiences), which clearly has potential to affect student learning. After 'feedback' and 'learning' respondents most frequently cite words relating to 'assessment/evaluation', followed by 'sharing/discussion' in recording their understanding of the purpose of the crit. It is interesting to note that whilst assessment and feedback often go hand in hand, it is far less common to find educational activities that bring together assessment with sharing and discussion. This can be read as a positive aspect, in which the crit model creatively brings together these elements, or as a negative aspect exposing a model that is undertaken without a clear idea of its purpose.

Other repeatedly cited words in relation to the purpose of the crit reflect the kinds of things that students are learning, including reviewing, analysing and reflecting; presenting; refining and improving ideas; developing understanding and critical thinking.

In contrast to respondents' first thoughts about the crit – as a place of fear and stress – there is a much more measured acknowledgement of the purpose of the crit. Students do seem to have an awareness of its intended purpose, however they are less sure that they **actually** learn what they are intended to learn:

'I'm not sure how much I have learnt directly from my own [crit], as the blinds tend to go up for the duration. I often go away believing that I have not learnt anything from my own reviews.'

Student respondent

When asked, '*What do think you learn during a crit?*', the most commonly held view recorded was that crits allow students to learn how to present both visually and verbally, and to communicate their design ideas. Through the process of clarifying an idea for presentation, alongside the feedback given in the review, students learn how to improve their work (both in their current project and for the future). Respondents also particularly valued the way in which the involvement of their peers means that students see other viewpoints and different approaches to the same task. A number of students recorded learning from their peers as one of the key things they learnt from the crit.

In addition, respondents felt that they learnt to think critically, work to a deadline and manage their time. There were quite a variety of opinions about what other learning might go on in a crit. Again this can be read positively (that the crit allows different students to learn in different ways at different times) or negatively (that the learning purpose of the crit is unclear and attempts to be all things to all people).

Finally there were two respondents who perceived the crit quite negatively in terms of learning, describing their learning as:

'Dealing with extreme stress, rejection and lack of sympathy, controlling panic attacks, learning how to defend my statements.'

Student respondent

and

'how to sit in silence.'

Student respondent

The deadline that the crit provides was valued by both students and tutors. In addition, the opportunity to see the work come together at a particular point in time was highlighted as something that tutors liked about the event. It was repeatedly highlighted by both students and tutors alike that crits need to be undertaken at a time that allows students to respond to, and develop from the comments they receive.

Alternatives

When asked if there was a better alternative to crits and if so to describe that alternative, respondents almost entirely recorded 'no', or proposed amendments to the current model rather than a complete rejection of it. This might reflect that overall the crit is seen to be a better (if not perfect) model than alternatives, or it could be simply that the system is so much a part of the culture of architectural education that it is impossible to imagine it without the crit:

'I can't really think of one - proof that architectural education has formatted me to think of them as the only mode of assessment for design work!'

Student respondent

The alternatives proposed by respondents are summarised in the table 2:

Alternatives to the Crit	Further detail
Exhibition format	Pin-up only. The drawings should speak for themselves
Small group discussions	To promote a more relaxed atmosphere
More targeted variety of learning events	Different crits for different occasions and stages in the project as well as more targeted learning outcomes, including round table small group seminars, students presenting other students work, students presenting to clients with tutors as silent observers, peer reviews and the exhibition format, group and paired reviews, charrettes and workshops, role playing, on site review, review while making work, reviews in public
Review process	An implied shift of meaning from criticism to a review of the project
Hand-in only	With a proposal for the work to be marked by a number of different people and followed up with tutorials
Student involved critique	More informal setting where students are more involved in the critique

Alternatives to the Crit (continued)	Further detail (continued)
Not assessed	<p>Presentation with questions but no comments. Assessment undertaken during the design process and at a final meeting between tutors and student in informal setting.</p> <p style="text-align: center;">‘Once that pressure was off- I was better at putting the focus on what I want to show and what I want to get out of the crit...’</p> <p style="text-align: right;">Student respondent</p>
Colloquium	Presentations followed by group discussions (possibly around particular themes)
Peer review	Students are the sole (or lead) reviewers
In camera	Presentations in private to tutors only
Tutorial review	One-to-one review
Competition review	Projects are presented and one or more winners chosen
Project swap	Students pair up and spend a day doing an hour together on one person’s project and then the next hour on the other persons’ project and so on.
Client/other professional led review	In order to mitigate the power of the tutors

Table 2: A summary of alternatives to the Crit as suggested by respondents

These alternatives demonstrate the range of ways in which it is possible to develop the format for different purposes. In particular, a number of respondents made clear the importance of using a range of different design reviews for different purposes throughout the academic programme:

‘Crits can take place in many different ways, and those that encourage positive discussion and constructive criticism are extremely useful.’

Student respondent

Respondents once again focused on the behaviour of tutors as a way to improve learning potential. Students proposed that tutors behave in a polite and supportive way, that they clearly explain their ideas and the reasoning behind what they say. One student suggested that tutors need to be educated in how to behave during crits:

‘Educate tutors - some are very good at understanding the situation, but some aren't.’

Student respondent

Discussion and Conclusions

It is apparent that the crit is still very much a central part of architectural education and that there are elements of the crit that are still problematic for some students, some of the time. A large number of students experience the crit as a fundamentally stressful, fear-inducing event. However, at the same time, they are largely aware of its potential as a learning experience – the aspiration overwhelmingly being described in terms of gaining constructive feedback on presented work, the experience of learning primarily relating to presentation skills. Although many students have some experience of crits in which they have received helpful feedback, the apparent discrepancy between *aspiration* and *experience* is interesting. One clue to understanding this discrepancy could lie in the stress and fear which students report as being associated with the event. This finding is in line with other recent research into the crit in architecture (see Flynn 2005) and art and design (see Blythman, Orr and Blair 2007). Both relevant reports suggest that this kind of anxiety is likely to block students’ ability to learn in the crit environment. This argument is supported by research in education and educational psychology, where stress has been shown to have a negative impact on academic performance (Akgun & Ciarrochi, 2003; Sloboda, 1990; Struthers, Perry & Menec, 2000). It could, therefore, be interpreted that in the event itself, stress and fear reduce many students’ ability to listen to and engage in comment/dialogue in which constructive criticism might develop. Or as the student above put it, ‘...the blinds tend to go up for the duration.’

Also relevant to note is the well-rehearsed argument that fear is likely to inhibit creativity; that if there is no safe space to take risks, this will inhibit the creative process (Tharp and Reiter, 2003). Most of the crit descriptions

and experiences in this study do not evoke a sense of 'a safe space' in which to try things out. Hennessey and Amabile (1987), in an extensive review of research into supporting the creative process within education, also cite a *'focus on expected evaluation'* and use of *'plenty of surveillance'* among five key approaches to killing creativity (p 13-14).

Research has shown, perhaps unsurprisingly, that if fear becomes a chronic condition it is also likely to affect students' mental and physical health (Beatty & Beatty, 2001; Bovier, Chamot & Perneger, 2004; Powell, 2004). If it is the case that the crit creates stressful conditions in which many students learn less, are less creative and are building the potential for related mental and physical health problems, then it is important to ask, 'Why is the event so stressful?' And, 'How might debilitating stress and fear be diffused?' The pressure and potential stress of preparing work in the run-up to a scheduled crit is one aspect, but the deadline and focus that the event provides for student work and thinking is something appreciated by staff and students alike. The stress and fear *in* the event, however, could be assumed to relate to two main issues: personally delivering a (semi)public presentation and the fear of being personally and professionally judged or assessed.

It is not clear from the research whether or not students are provided with separate targeted support to broadly develop presentation skills, however, nothing is mentioned. Although visual and verbal presentation skills were most commonly cited as a learning outcome from the crit, the idea that one develops these skills only by 'having a go' and then reflecting on how well it went, appears to be rather a blunt learning tool. There have been examples of targeted student support to develop students' competence and confidence in these skills at a range of schools of architecture (for example via the CUDE project). It is suggested that a more consistent approach to this kind of 'supplementary' skills development could help to reduce fear for some students, through the increased competence and confidence that it gives them back 'on the floor' of the crit itself.

Similar crit 'support acts' might be targeted at the development of critical capacities, where modelling of constructive critique, observing and evaluating precedents and practising communicating criticism, can initially be safely explored at a distance from students' own work, fuelling more open dialogue and debate. Research in education suggests constructive feedback in a supportive environment should have a positive impact on learning. Supportive environments are seen to increase student's belief in their own abilities and increase their motivation (Bereiter & Scardamalia, 1989), both of which are likely to lead to better academic results (see Graham and Weiner 1996 for a review). Targeted development sessions might then begin to address the second suggested source of stress and fear – being judged and assessed – where familiarity

⁹ Some evidence of this kind of transference of critical skills was seen in the use of studio peer discussion groups at the University of Sheffield (Parnell 2001:12).

with a co-creative, constructively critical atmosphere gradually has a positive impact on the parallel crit experience.⁹

Relevant here is the importance that the research findings place on the role of the tutor in shaping the learning potential of the crit. Respondents repeated their demands for tutors to behave in a way that is polite, respectful, and engaged, not abusive or humiliating. Students asked that tutor-critics value the work that they have put in, don't interrupt their presentations and allow them to respond to questions and comments about their work. When summarised in this way it seems like the minimum standard that we would expect from any critic, but it is clear from responses that this is not always the case. This suggests that there is potential for a tutor focussed briefing, parallel to the crit 'support act' for students, on communicating constructive criticism. All of the above should ultimately contribute towards reducing fear of judgement and increasing learning.

In addition, tutors have huge potential to effect learning in developing the format of the event. Feedback suggests that there is a need for a greater variety of approaches for different occasions, based on priorities for intended learning. This suggests that tutors need to have a pedagogical grounding in order to raise their awareness of alternative approaches and understand the likely educational impact of these approaches. Fundamentally there is a need for a clearer set of processes in setting up the crit, including: submitting work in advance to avoid over-tired students; briefing both students and tutors as to the purpose of the crit and the nature of good, constructive feedback; structuring sessions to allow students to prepare their presentations; introducing ways of recording the feedback during the crit; and keeping the process to time.

It is clear from the research that for some students the stress and fear linked to the crit is more of a problem than for others. Further research, with larger numbers of students is required to explore the possibility that female students might find this more of a problem than male students. Research into why women leave architecture (de Graft-Johnson, Manley and Greed 2003) and architecture and race (CABE 2004) both suggest that the crit is an event that can put off female and/or black and minority ethnic students continuing their studies in architecture. It is not clear from the present research whether either gender or race significantly affected students' experiences of the crit. What is certain, however, is that for a relatively small number of students the current model is contributing to a potentially damaging negative experience that has no perceived learning potential.

Concluding thoughts

It is facile to say that learning experiences should be designed with learning in mind, but this is arguably at the root of all of the practical recommendations that have emerged from this research. It is worth emphasising here the recommendation to demonstrate greater cognisance of the stress and fear associated with crits and the potential impact of this on student learning (and health). Student stress and fear clearly persist, alongside a convergence of crit 'models' upon the dominant format described in the opening to this paper. That fear is likely to inhibit learning in a crit context is not new knowledge (although it is less common to acknowledge the impact of 'crit fear' on the creative process – an issue that requires further research). However, it is suggested that this knowledge rarely informs the design of the crit, its alternatives, or its potential 'support acts', as discussed above. This should not be read as a plea to 'go easy' on students, or to reduce criticality, but as an appeal to educator professionalism to consider and openly discuss stress as a critical factor in the effectiveness of learning and teaching approaches.

Findings suggest that the crit continues to be poorly defined, or at least unfocused, in terms of its intended impact on learning. This is reflected in the wide ranging thoughts collected about what can be learned and what makes a successful crit, as well as the more general accounts of crit experiences. While this could be interpreted positively, it is argued here that the crit commonly appears to be trying to be all things to all people, rarely being particularly successful in any one aspect of learning. The crit is undoubtedly sometimes a positive learning experience for many students. However, its recognised potential to support constructive, dialogic approaches to learning does not appear to be realised often enough.

The notion of dialogue as a basis for learning is attractive because of its potential to challenge and move forward existing hegemonic knowledge. A number of respondents highlighted the negative potential for the crit to be a 'shaping tool' that, by inference, inculcates students into the values systems and associated existing knowledge of the tutor-critics. This is a key issue in relation to the fear of being judged and assessed, reflecting the broader relevance of tutor-student power relations.¹⁰ Dialogue, in contrast, is seen as a crucial element in the construction of new knowledge (Reynolds, Gale, and Jetton 1996), through which students and tutors are able to challenge accepted ways of doing things and co-develop new understandings (see also Wink, 2005). Indeed Willenbrock argues that *'if there's no dialogue, there's no learning'* (1991:94).

Although attempts continue to be made to rebalance student-tutor power relationships (by introducing other voices to the crit, enforcing student-critic roles etc), co-constructive dialogue, as described above, remains a challenging goal. The challenge lies in part with the perceived

¹⁰ Webster (2006:287-8) discusses these power relations in the context of Foucault's "archaeology", of the illusory nature of disciplinary "discourse", "truth" and "knowledge" and the 'micro-technologies of power' used by institutions 'to control entry or train individuals towards a dominant disciplinary paradigm or habitus' - the latter term being borrowed from Bourdieu. Stevens (2002) similarly draws on Bourdieu to develop a powerful framework with which to critique the socialisation processes at work within architectural education.

association of the crit with summative assessment, i.e. marking. Engaging in dialogue in this context might be seen as a risky strategy by many students. Perhaps even more of a challenge however is presented by tutor-critics, who to some degree cannot escape the effects of the socialisation and enculturation process they have experienced (Webster 2006, Melles 2008). While tutor values ultimately determine student marks, these values will continue to determine 'quality' and appropriateness in architecture, the discipline. This is arguably inevitable in any professional/disciplinary sphere. The tacit, or hidden agenda of the tutor-critic therefore defines the milestones to be achieved in the ritual passage towards becoming 'an architect' – not in the official professional sense, but in broader cultural terms, as described by Bourdieu (see Webster, 2011).

Crits, therefore, by their very nature, will continue to make some people feel, as this student respondent did as though they *'should not be on the course'*, while others will aspire to accumulating the required tacit knowledge and associated skills, understanding and attitudes. The crit, as a site of 'insider' judgement, will continue to provide aspiring students with oblique clues as to how to achieve this 'insider' status. As such, the crit is a powerful site of production for the culture of architecture: as architectural educators, we need to continue to question which cultures are desirable, and which are destructive. The present culture seems to be more about fear, than learning.

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