What happens when design feedback moves across the digital divide?

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Abstract

Critique in visual communication education is critical to the knowledge construction

and learning associated with creative project outcomes.

The spoken studio design critique is a firmly established practice within the design

learning and teaching environments. The critique in the design education setting

builds knowledge by focusing on concept clarification, and developing critical

discernment and professional dialogue and presentation skills. The design education

process to create visual communication outcomes is traditionally supported by the

spoken critique as the primary form of feedback.

Recently, it has been suggested that this universal model of the spoken face-to-face

design critique has become stuck within historical boundaries. Students and teachers

report that spoken design feedback remains a weak component within creative

education and a strong dissatisfaction within art, architecture and design education.

What happens if we move out of the traditions of face-to-face spoken design critique

and cross the divide to a model of contemporary visual communication education, to

digital delivery of spoken feedback? Preliminary findings suggest the advantages of

the delivery of feedback via the internet as pre-recorded mp3s outweighed the

disadvantages and supports the learning preferences of the m-learning generation.

My doctoral thesis research entitled 'Creative critique in contemporary visual

communication education: effective spoken feedback on design projects using

emerging interactive mobile technologies', will investigate the value of this boundary

crossing. The presentation will expand on the preliminary findings and research

approach, and seek feedback on the value of this boundary crossing.

Keywords: Feedback, digital divide, critique

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What happens when design feedback moves across the digital divide?

Purpose of this paper

This paper describes the Phd research study 'Creative critique in contemporary visual communication education: effective spoken feedback on design projects using interactive mobile technologies' and presents a pilot study informing the research. The paper asks: 'What happens when design feedback moves across the digital divide?' with the aim of seeking further expert input to the doctoral study.

Student learning and the design critique

Creative critique in visual communication education, that is, in the design school context, is critical to the knowledge construction and learning associated with creative design project outcomes. Creative outcomes are vital to design learning, and design critique is critical to learning through design. If we accept that the objective of design critique is to construct knowledge around a design project then the deconstruction of the design critique, to inform the process of giving and receiving effective feedback, is a priority, particularly in the rapidly evolving virtual, online and mobile environment of contemporary education.

The spoken design critique, or creative critique, is a firmly established and common practice both within the design education and professional context. The critique in the design education setting builds knowledge by focusing on concept clarification, and developing critical discernment and professional dialogue and presentation skills.³ Critiques "are significant occasions in a student's educational career ... students gain experience in expressing their design-related ideas".⁴ Within the professional environment the design critique is part of the ongoing dialogue between studio colleagues, designers and clients engaged in the design creative process. Although

design critique is a common practice, there is limited evidence assessing the principles or practice of effective spoken design critique.⁵

The design critique has a long tradition as a primary formative and summative assessment tool within studio based art, design and architecture education, and has seemingly remained the same for some fifty years without pedagogical development. Recently research has been conducted closely examining the forms and functions of design critique and how design and architecture students interpret spoken feedback, adding significantly to the body of knowledge informing design critique. Researchers have found that design critique is not always successful in enhancing student learning and describe feedback and critique as highly contestable and emotionally charged events requiring further research to establish the role of critique and what constitutes effective feedback, to enhance learning outcomes.

There is a widely held opinion that critique is a weak component in traditional creative education and remains a major student dissatisfaction with art, design and architecture education. Horton highlights the oral group critique as a problematic educational tool, stating "there is very little critical, or even anecdotal, literature on its role and function". Many researchers are endeavouring to identify the elements that make the spoken studio based design critique more effective. 11

Both teachers and students value design critique as a pedagogical tool, aspire to the associated increased learning outcomes and agree on the purpose of design critique, but there is a recurring disparity between the intention of the critique and the reality of the practice. ¹² In practice, students' perceive the design critique as damaging to student self-esteem, ¹³ a subjective commentary rather than an objective critique, ¹⁴ an unequal power relationship, ¹⁵ and a non-inclusive uncommunicative language event. ¹⁶ The Teaching staff note that effective feedback in the design critique is challenging to construct, deliver and conduct as an effective social interaction and learning opportunity. ¹⁷

While there are a plethora of theories on the principles of effective feedback ¹⁸ "feedback is under-conceptualised in the theoretical literature in HE ... this makes it difficult to design effective feedback practices or to evaluate their effectiveness". ¹⁹

Design critique using digital technologies: Crossing the digital divide

Currently in design education, technology is most often used to support traditional modes of teaching by, for example, improving the quality of lecture deliveries by making lecture notes and the face-to face lecture podcast available online 'anywhere anytime', and even recreating face-to face tutorial discussions asynchronously online. As Betham & Sharpe (2007) note, "many of our ... strategies for education consign digital technology to ... improving our current systems supporting education, not to the transformational task of changing them". Perhaps it is time to move forward 22 and think of the new and different transformative opportunities available to design education and to the design critique in the age of new technologies. 23

The introduction of technology into the design feedback context may translate into new expectations about the mode of delivery and time and place of the receipt of feedback.²⁴ Visual communication educators are familiar with the general principles and practice of effective feedback, particularly in the face-to-face context, but the application of the principles in the practice of feedback, using interactive mobile based technologies, is not well conceptualised or researched.

A pilot study

McCormack and Taylor (2006) have experimented with the affordances of the virtual environment, in a blended learning and teaching studio based context, to provide design critique using digital technologies. They have reported on graphic design students' and their lecturer's perceptions of the advantages and disadvantages of spoken design feedback recorded on an ipod and emailed to individual students as a digital voice file. Students' perceptions of the feedback in a final year graphic design subject in 2005 & 2006 were gathered in a pilot study using an emailed questionnaire. The lecturer's reflections were presented in a university-wide forum on assessment feedback.

Two scaled and two open-ended questions on the survey were of particular interest to this investigation: Did the recorded verbal feedback emailed to you help you learn (yes/no); Did you listen to the feedback more than once (yes/no), if yes, how many times did you listen to the feedback; In what ways did receiving feedback electronically help you learn? and In what ways did receiving feedback electronically hinder your learning? Twenty students (67% response rate) completed the 2005 questionnaire, and fifteen students (25% response rate) completed the questionnaire in 2006.

All 2006 respondents, and all except one student in the 2005 group, felt that the feedback emailed to them helped them learn. Privacy, convenience (and accessibility) and the opportunity to listen, and re-listen, to the feedback were the advantages most frequently mentioned by students.

Seventy percent of the 2005 survey respondents, and eighty percent of the 2006 respondents, listened to the feedback more than once. "The feedback allowed me to review and reassess my work ... [and] be able to have a record that I can go back to at any time" (2006 student). Being able to return to the feedback allowed students to hear the multiple messages in the feedback. During face-to-face feedback students often miss learning opportunities as they are concentrating on an earlier comment rather than the comment currently being delivered. "Being able to replay the message again and again alerted me to the things I needed to address" (2005 student).

Listening could occur at a time, and in a location, of the student's choosing. "It was good to sit at home, where it's nice and quiet, and listen to the feedback" (2005 student). This more relaxed environment facilitated the reception of critical feedback. "It is less intimidating ... when receiving negative feedback. It is easier to accept it via recorded voice messages than face-to-face" (2006 student). Tone of voice allowed students to hear the emotion and emphasis in the lecturer's comments: "You could understand what the lecturer was talking about through the tones in her voice" (2005 student).

Few students identified aspects of the feedback delivery that hindered their learning. Loss of opportunity to interact with the lecturer, to clarify comments or to ask questions, was mentioned as a disadvantage by four students. One 2005 student for example, noted that while online feedback was valuable during the developmental phases of a design, face to face consultation would "be more beneficial during the closing stages of the project, as it will be more of a conversation, give/take, ideabouncing". Inadequate home computing facilities was mentioned as a disadvantage by two students. However, one of these students felt that "even with the download time [broadband was not available] having the record to look back on at my convenience was worth it" (2006 student).

The lecturer identified several time-related advantages. There was time for thoughtful construction of the feedback messages, time to elaborate on a point if needed and the opportunity to edit the comments before sending them. The construction of feedback in a personally comfortable environment, at a time convenient for the giver, was also an advantage. After all feedback had been returned the lecturer felt that she had saved both time and energy as indicated in the following comment.

The greatest advantage to the teacher is that it takes considerably less time to deliver considerably more effective feedback. Written feedback for GD4.2 2004, took 6 staff approximately 5 days to complete a tick box form with approximately 100 words of comment. By comparison in a similar subject, recorded feedback for GD4.1 2006, took 2 staff 2.5 days to complete and deliver with approximately 400 words of specific comment.

The lecturer also noted a potential advantage where there are multiple markers as is frequently the case in design assessment. Staff can listen to each other's feedback. This can increase the consistency of marking and feedback across classes within a student cohort. A disadvantage for the lecturer as the giver of the feedback was that she could not see the receiver responding to the feedback to adjust the feedback in response to the receiver's reactions. She felt that this mode of delivery required the giver to have a wider design critique vocabulary and a higher level of competency and confidence to use it constructively. The lecturer also recognised that the expectation that the online medium for receipt of feedback was available to all students, and was equally reliable for all receivers, may not always be fulfilled.

Students' questionnaire responses suggest the advantages of this mode of delivery outweighed the disadvantages and support the learning preferences of the contemporary learner. For time poor academics seeking to balance the tensions between timeliness, quantity and quality of feedback for student consumers, who are

frequently not on campus to receive that feedback in a face-to-face session, electronic delivery of pre-recorded verbal feedback may be one way to meet students' learning preferences. Generalisation beyond this project is limited, by the small number of respondents and the absence of an in-depth understanding of the stakeholder perspectives and technological affordances.

Exploring beyond the boundaries of the pilot study

Further research is required to systematically collect and analyse the views of the sector stakeholders, best practice examples of critique, and innovations and affordances of emerging technology. The doctoral study 'Creative critique in contemporary visual communication education: effective spoken feedback on design projects using interactive mobile technologies', will systematically investigate the viewpoints of students, teachers and professionals with an in depth design-based research methodology to establish a comprehensive study of the issues from these key stake holders' perspectives engaged in the practice of giving and receiving spoken feedback using interactive mobile delivery technology.

The study will use a design-based research approach to guide the exploration of the problem, design and implementation of a solution, and the creation of design principles. (see Appendix 1: One-page plan for design-based research). A constructivist research paradigm and qualitative research design will be used in association with some quantitative data collection and analysis. A constructivist epistemology is suggested by the interactive relationship between the researcher and the research participants. A socially constructed ontology with an interactive methodology is indicated.

Central to this study of creative critique in contemporary visual communication education, is the question of what constitutes best practice in spoken critique and how it can be delivered to enhance student learning in a higher education context. To respond to this central issue, the research questions are:

- How do visual communication educators identify, understand and apply the attributes of spoken creative critique, in a contemporary education setting?
- What are the critical characteristics of effective spoken creative critique?

 In what ways does spoken creative critique using interactive mobile technology contribute to the construction of students' design knowledge?

The literature review, and the theoretical perspectives of reflective practice and cognitive apprenticeship, will provide the theoretical base for establishing the conceptual framework for this study. The literature review identifies existing relevant knowledge, and the knowledge that is required but does not currently exist, to inform the study. Conceptions of reflective practice sit centrally with in this study and the practice of visual communication education, as the traditional model of skills acquisition through observation, action and dialogue. Cognitive apprenticeship adds conceptions of thinking made visible through social interaction and dialogue. The literature review and the conceptual framework inform and guide the study by providing existing research knowledge, identifying the gap in the research knowledge relevant to the problem, and provide ways to deconstruct and understand the critical role effective spoken feedback as critique plays in visual communication education.

This research will identify and bridge the gap in the research by investigating the tension between the espoused theory of effective feedback and the enactment in the practice of giving feedback, and providing useful strategies for academics to assist in enhancing the practice of giving effective spoken feedback in a digital delivery mode. The research will contribute to establishing a readily accessible common theoretical and practical basis for the delivery of quality spoken critique and evaluation standards, and will make a significant contribution to the research body of knowledge, that may also be generalised to a wider academic context. In so doing, it will investigate the value of the boundary crossing, between the traditional studio-based face-to-face spoken critique and the emerging contemporary model of digitally recorded spoken critique delivered using mobile technologies.

Analysis of practical problems by researchers and practitioners in collaboration

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Development of solutions informed by existing design principles and technological innovations

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Iterative cycles of testing and refinement of solutions in practice

Reflection to produce Ndesign principlesÓ and enhance solution implementation

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Problem

Students in visual communications disciplines are provided with feedback on their works. The quality of the feedback and its delivery often cause problems for students, who may not understand and may be hurt or humiliated by the public nature of critical feedback.

General literature review:

Literature on the problem generally, assessment and feedback in visual communication and technological affordances for critique will be reviewed

Practitioners:

To explore the extent and nature of the problem, 2 practising design teachers, 2 design professional teachers and 1 professional designer will be interviewed

Design & development of possible solution

A model of spoken feedback for visual communications will be developed to guide teachersÕ elivery of effective feedback. A learning environment will be created to scaffold student learning with constructive feedback.

Theory:

The learning environment will draw on theories of:

- Social constructivism
- Reflective practice
- Cognitive apprenticeship

Literature:

A more intensive review of the literature to extract existing principles for the development of effective, and technological affordances to deliver feedback

Outcome of this phase: Creation of draft guiding principles from theory and literature.

Solution:

A learning task will be designed for implementation with final year design students. A model of effective spoken feedback will be developed from the guiding principles, to assist teachers to provide effective feedback to students in the assessment of their work. The model will comprise general principles of effective feedback, together with specific advice and examples to refine teachersÕ understanding of its use. It will also include guidance on the use and affordances of technology to enable the spoken feedback.

Implementation & evaluation cycles

The learning task and the model of effective spoken feedback will be implemented and evaluated using interpretive goals and qualitative feedback.

Implementation 1:

The learning task will be implemented with the researcherOsclass of final year design students. Students will complete the task and submit for assessment. Feedback will be crafted and delivered according to the draft guidelines/model of effective feedback. In total, the task will comprise 5 weeks of a semester.

Participants:

The entire class will participate in the first implementation (with informed consent). Six students will be selected across a range of abilities for in depth interview and analysis of critique recordings.

Data collection:

- · Observation and field notes
- Collection of recordings and analysis of six
- In depth interview with six students
- Surveys with whole class

Analysis of data:

Data will be analysed using a process of data reduction, data display and conclusion drawing and verification. Constant comparative method will be used to determine issues and themes emerging from the interview data to assess students. Survey responses will be analysed using descriptive statistics to identify patterns of responses, and perceptions of students. The feedback recordings will be analysed using narrative inquiry and nvivo analytical tools to identify emerging themes, patterns and anomalies of feedback delivery using technology. The data analysis will establish weaknesses in the model to enable revision and refinement.

After review and revision Implementation 2:

The revised model will be implemented with four teachers and their classes. Teachers will be coached in their use of the model prior to the implementation.

Participants:

Four university design teachers and their classes will use the task and feedback model over 5 weeks. Four students will be interviewed from each class.

Data collection:

- Teacher journals and field notes (x4)
- Individual interviews with teachers (x4)
- In depth interview with 4 students (x4)
- Surveys with whole class (x4)

Analysis of data:

As above

Design principles

A model and guidelines for effective spoken feedback in the visual communications disciplines will be developed for publication and dissemination

Design Teachers Focus Group

Design teachers and teacher professionals will discuss as a group findings and identify refinements in design critique that are characteristic of expert performance to develop a revised and amended shared understanding of principles and enactment of effective spoken feedback to be incorporated into final design principles.

Revised design principles

Final design principles

Dissemination:

Publications: The research findings and

model will be published in journals and conferences Pedagogical method: visual communication and design courses will be able to use the framework with teachers and

students.

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