

RE: Designing a Digital Sketchbook

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ABSTRACT

Why are digital tools not replacing traditional sketchbooks? Our research explores the fundamentals of sketchbook use by thinking about them as Creativity Support Tools that could be digitally replicated.

1. RESEARCHING SKETCHBOOKS

The project was a research led teaching activity, run by the author, involving undergraduate students on the Digital Interaction Design Course at the University of Dundee. The research phase involved a thorough examination of real sketchbook use, not just in terms of drawing functions but in terms of the role they play for creative practitioners as creative tools, repositories for information and communication devices. Three things were done during our research. 1. A survey of 10 popular digital sketching tools was performed in order to establish features that are already supported in digital form. 2. An analysis of 42 entries in Richard Brereton's book, "Sketchbooks: The Hidden Art of Designers, Illustrators & Creatives" [2] was conducted to establish some basic thematic codes that could be used to inform further investigations. 3. Our own semi-structured interviews were conducted with a range of sketchbook users in and around Duncan of Jordanstone College of Art and Design.

1.1 Methods

Answering Shneiderman's grand challenge to develop creativity support tools [3], we used Csikszentmihalyi's creative systems model and his adapted description of the creative process as a way to analyze the data [4]. In order to understand how sketchbooks find a place within this creative system, as a 'support tool', we mapped out our data in relation to both aspects of this model. This allowed us to group data and thematic codes in two complementary ways that helped to inform decisions about what elements of sketchbook use should be designed for. In doing so what emerges is a detailed picture of the role of sketchbooks in supporting creative practice across a creative system in terms of traditional and digital functionality.

2. A SURVEY OF SKETCHING APPS

Generally speaking though, mark-making capabilities are sadly lacking compared to the myriad possibilities that can be used to engrave, daub or splatter onto traditional sketchbooks. However, many apps provide a range of virtual pencils and brushes, all with varying levels of control and customizability. Some are simple to use, others require sophisticated interface components that must be carefully organized before a mark is even made. This can be a frustrating, unrewarding and sometimes off-putting experience for many creative practitioners. That said, there are many plus points that digital sketchbooks might have over traditional ones. Storage for example, numerous sketches might be stored on one device, rather than having to cart numerous sketchbooks. Networking

capabilities, to share your ideas with your friends and perhaps even clients. Not forgetting the principles of digital multiples that can be distributed to wide audiences and the fundamentals of 'do', 'undo' and 'redo' that allow for multiple versions and streams of creative ideas to be explored in rapid succession. The issue is complex, and not one of the reviewed apps has all of the features that appear across the range, although iDraw comes pretty close.

3. ANALYSING THE LITERATURE

A number of sources could have been used for initial analysis purposes [5, 6, 7]. Brereton's book was chosen because it's format offered the clearest and most succinct material for analysis in the form of individual entries by a wide range of creative practitioners. A grounded textual analysis of these entries revealed 13 emergent codes, some of which were merged into 'super codes' as we examined the data in more detail. For example, codes 10 and 12 ('need editing' & 'never edit'), though diametrically opposed to one another, were brought together under a new super-code called 'Editing'. Similarly, codes 11 and 13 ('Communication Tool' & 'Collaborative Tool') were brought together under 'Sharing', as one is often an extension of the other. 'Editing' and 'Sharing' are themselves very closely linked together with another code ('Freedom to Play'), which represents the way in which sketchbooks facilitate exploration and experimentation with ideas. Code 4 ('Private Journal') comes into play here too as privacy is essential for this sense of freedom. Privacy is the opposite of 'Sharing' and it would seem, though it is not always the case, that 'Editing' really comes into play when people think about sharing their sketchbooks with others.

4. SEMI STRUCTURED INTERVIEWS

The second stage in our research process required the consolidation of research material produced by the student teams. Each student team was asked to make a short film about sketchbook use that was based on semi-structured interviews with sketchbook users, as well as additional material from their own observations. The film making process helped them become immersed in the data. The students were then asked to collate all their data using post it notes, i.e. to pull out significant quotes, phrases, images and other observations that represented something significant they had discovered about sketchbook use. This information was then filtered using the 'codes' developed from the analysis described above. In general, what was interesting was that most of the material echoed very strongly the kinds of things that appeared in the other code set. Essentially, this helped to verify that the initial analysis had provided a fairly robust and useful coding structure.

5. MAPPING TO THE MODEL

Csikszentmihalyi's system model, talks of three interrelated components of creativity, the domain, the person and the field, as

well as phases of the creative process Preparation, Incubation, Illumination, Evaluation, Elaboration. From our analysis we have systematically uncovered a place for sketchbooks in relation to both aspects of this model.

5.1 Engaging with the Domain

For creative practitioners, starting a project is always difficult. In relation to the systems model we have found that sketchbooks allow creatives to engage with the domain as a form of preparation. The first step in this process is often about orientation, about finding where to start. This involves collecting information and mapping it relationally in some way to existing knowledge. Preparation then, is all about getting to know what exists in the domain as a way of orienting yourself to a particular problem or issue. In sketchbooks this tends to manifest itself in three ways: 1. Collecting reference materials for inspiration; e.g. collecting pictures, postcards and magazine cutouts etc. 2. Collecting physical materials; such as different papers, textures, colors or media. 3. Gathering observations, i.e. using drawing as an observational tool to gather visual data about a particular subject or situation. Sometimes it's about looking back at an archive of older sketchbooks as a source of inspiration. At others it's about making your own sketchbook from scratch in order to clear the decks. The Super-code of 'Research Tool' (and it's related codes), fits particularly well to this aspect of the model.

5.2 The Creative Person

Relating the systems model to the process model, it becomes apparent that two phases of process occur within the individual, as they take their place in the creative system. Incubation and Illumination. Incubation is about putting an idea to the back of your mind, letting it seep into your unconscious, so you can reflect on it and manipulate it in interesting ways. Often it needs to be entirely forgotten about. Creatives often take breaks, or take trips away from work to provide this space. Resting and relaxation are important for incubation. Interestingly, for many creatives, working in sketchbooks provides such a relaxing activity but one that lets them freely play around with ideas in a private non-judgmental space. Several practitioners describe sketchbooks in some way as an extension of their brains as a form of "memory aid", but more than that, they are cognitive tools that allow people to think and organize their thoughts in various different ways. Sometimes, consciously and at other times, subconsciously doodling. The later activity is a kind of visual wandering that often seems unrelated to work but often leads to new ideas. Writing down or drawing elements from dreams is another common way of capturing some of this incubation process. The super-code of 'Incubation Tool' (and its related codes) fits well to this part of the model. Illumination is the output of incubation. It is about coming up with something new, something innovative. Many creatives talk about this as something that just pops into their heads but this doesn't do justice to the work that has gone on in the incubation phase. In sketchbooks these ideas, can just happen during an active phase of working, or they can be an evolution of many half developed ideas that have been created during incubation. Often they are indistinguishable from all the working around them, but the creator knows that something is different or better about them than the others. Often illuminating ideas come to people after they have been working on sketchbooks or if they are away somewhere taking part in some other activity e.g taking a trip. Sketchbooks provide a quick

always on mechanism to capture the important genesis of a new idea. That's why so many people carry them around with them all the time. The Super-code of 'Omnipresent' (and it's related codes) fit well to this part of the model.

5.3 Facing the Field

In relation to the systems model our data points towards another two phases of the creative process that are related to or 'face' the field. They are evaluation and elaboration. Evaluation, is a period of doubt, a period of reflection. It's all about questioning the idea from various different perspectives. Is it good? Does it fit? Will it be accepted? Often this is done privately by the individual, relating the new idea to older ideas of his/her own or to other ideas of other creatives already in the domain. Sometimes though sharing these ideas with other people is the best way to evaluate them. Sketchbooks facilitate the evaluation process in two ways: Ideas can be evaluated in relation to material gathered during the preparation stage and an evolutionary path can be traced from its origins to its realization. Sketchbooks can be shared with others and discussions can form around the ideas in them, allowing people to further explore their value and modify them accordingly. The super-codes 'Sharing' and 'Editing' are related to this aspect of Sketchbook use. The elaboration of an idea is essentially it's end point. Arguably, sketchbooks have little use here, save as the reference point that informs the elaboration process. Or perhaps through supporting the refinement of the idea before it becomes 'truly manifest'. Creative work in sketchbooks often has a painful birth during this 'transition' phase from one medium to another. If sketchbooks could make the transition smoother then a significant hurdle in the elaboration process would be overcome. Digital sketchbooks might be able to do this more easily than traditional sketchbooks due to the transferable nature of the digital medium.

6. REFERENCES

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