

## **M level Inquiry Across Disciplinary Boundaries: Using Reflective Sketchbooks**

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Debates unfolding around the recent development of M Level programmes for teacher education are not unfamiliar to those being addressed in other professional disciplines such as business. A strong theme in our analysis is that reflective practitioners could be provided with a wider range of tools and methods to support them in their reflection. Considerable energies have been expended on e portfolios, but our experience of use of paper based reflective sketchbooks suggests that they may have some distinct advantages over text-dominated electronic media. In fact such sketchbooks challenge typed text as the dominant route to learning and communication (Gilbert 1998), (New, 2005), (Hickman, 2007).

Professionals in teacher education are currently exploring ways in which M level can be conceived in terms of professional learning. This is also important terrain in other professions. For example, best practice in business management involves constant innovation so that students do not experience a split between the research context of the business faculty and the experience of operating in the business situation. This is paralleled in education by the concern that trainees do not experience a split between the research or scholarly informed approach of university tutors, and the experience of practical teaching in school.

Our research question is concerned with how a consciously developed reflective sketchbook method can generate levels of critical thought that are both postgraduate and professionally valued in the workplace. We are also interested in the contribution this form of enquiry at M Level can make in terms of life long learning.

### **The context**

The sketchbook method has been widely deployed by fine artists, by design oriented professions including architects and engineers, as well as by poets and writers. There is a rich and vibrant range of source material available on artists' and designers' sketchbooks (Feininger, 1975; Klee, 1953; Perrella, 2004; Werman and Feldman 1973; Woods and Dinino, 2006), as well as for scientists (Phipps, 2006).

Although for professionals much of their day-to-day activity involves speaking and listening, when it comes to their education and professional development, there is often a very strong emphasis on text-intensive written and printed materials. Text here is assumed also to include numeric and diagrammatic information. This is accelerated in some ways by electronic resources, which in professional development are often surprisingly text oriented, not least in electronic reference databases and even in newer media such as blogs and wikis. This is though then partially offset by the growth in traditional multimedia such as video/audio/animation as well as their modern digital equivalents.

Our relatively narrow focus here is with professionals engaging with the creation and consumption of non-text resources, or combinations of text/non-text. These include creation through collage, drawing, sketching, painting and photography/printing. It also includes the presentation of the work created and finally in some cases its exhibition.

There is a long history of reflective practice and we are augmenting this with themes from creativity and journal making. The QAA framework states that study undertaken at Masters Level should show 'originality in the application of knowledge' and students should be able to deal with complex issues 'both systematically and creatively' (QAA, 2001). For courses in education such as the PGCE moving to M Level there is an alternative to arguing that more time will be needed to support the masters element of the programme in the form of the traditional academic written assignment (Sewell, 2007), namely to vary the methods and structuring of enquiry and assessment. Not to overburden by assessment, but to vary the form, the reflective sketchbook being one such variation.

### **Designed action research and comparative methodology**

This paper draws initially on a multi-year collaboration between educators in the two diverse professional domains of business and teacher education that have jointly undertaken research and development into visual media for knowledge work. The main body of empirical work that we have undertaken and review here involves experimental work with students and trainees of business and education using artist-type sketchbooks as episodic and key parts of their formal reflection process. This has so far produced two case studies, one of management masters students, the second of education students with a drama specialism. The central focus throughout is on the processes of creating and sharing professional knowledge, primarily through the use of sketchbooks as a key vehicle for visualization, reflection and critical thought in both domains.

In relation to research design, our starting point was two independent, but parallel deployments of sketchbook-based reflective practice at M Level one in a faculty of education and the other in a business faculty. These deployments had evolved pragmatically, using only basic theory. The two course leaders then reviewed a broad range of literature on creativity, reflection, and professional practice, leading to the development of a set of principles for sketchbook-based reflection upon which the next set of reflective exercises took place (Gardner 1993, Kolb 1984, Loi 2004, Moon, 2004, 2006, Polyani 1958) The principles were also used in evaluation of both sets of student work. In terms of research methodology we thus moved from pragmatic everyday practice to designed action research. A distinctive feature was that this was done in parallel, in different disciplinary areas to enable comparative findings to emerge.

We report here on the outcomes of experimental work in applying the art/design-oriented sketchbook approach at M Level with trainee teachers on a PGCE Secondary Drama course and experienced teachers on a CPD Drama module at the University of Chester, and with students on an MSc Business Management course and experienced business managers on an MBA elective module at the CASS Business School, City University.

### **Experiences with reflective sketchbooks**

There are already arguments that modern business management share many of the attributes of a design profession. Professionals in higher education use the language and concepts of design for example in talk of 'Programme design, approval and delivery' (QAA, 2006) as do teacher educators when they envisage learning in terms of breadth, depth and balance. Yet there is available very little source material or analysis of artefacts used by "managers as designers" or "teachers as designers", comparable to artists/designers sketchbooks.

The educational importance of sketchbooks for architects was emphasized by Crowe and Hurtt (1986): "For the apprentice or student of architecture, the sheaf of sketches and visual notes constituted a personal sketch book, a kind of architect's journal that would become a life-long companion." This considered strategic use of sketchbooks as a future resource acts

against the risk of loss of reflection. According to Mary Catherine Bateson (1995): “Experience doesn’t make you wise. Thinking about experience is what makes you wise....What we do in classrooms is what sets the stage for this process of growing, complexifying, balancing and reflecting.”

The education field has drawn significantly from professional fields such as business management, not least in the preparation of reflective practitioners. There has also been the growth in higher education of portfolios of work, not just in the arts (CLIP CETL, 2007) design and architecture (Johnson, 2005), but also more widely. Latterly, these have become computerised, as E-portfolios. The Higher Education Funding Council for England (HEFCE) is extending this personalised learning approach still further in calling for students to have Personal Development Plans.

### **Experiences with reflective sketchbooks**

We move now to reflect on the evolution and experience over four years of an innovative MBA elective module and an innovative PGCE (Drama) module. The MBA module is called “The Business Mystery” (Holtham, Lampel, Owens and Sims, 2006). Its primary aim has been to apply the lenses provided by a range of fine arts and humanities to collective consideration of business problems (Holtham and Owens, 2006). The PGCE module is called Subject Enrichment. Its primary aim has been to enrich trainees understandings of how they can consolidate, extend and deepen their drama subject knowledge. A secondary aim of both modules was to enable participants individually to develop different forms of perception and reflection than are perhaps provided through the conventional MBA and PGCE courses.

Both modules have now been run over four consecutive years. In the MBA with five half day sessions in the PGCE with a five day stay in a European city followed by four half day sessions. The core format of both modules appears to have stood the test of time. Both modules also aim to be different, though long-standing prior experience in this area is recognised such as that of Vaill (1989). There are no lectures beyond short briefings and the whole emphasis is on some kind of active learning. In the Business Mystery this is most typically in a location well beyond the business school, indeed the module explicitly aims to make active use of one of the world’s greatest business cities, London, as a kind of enormous teaching aid. Subject Enrichment has similarly made active use of Venice, Prague, Amsterdam and Barcelona.

In the Business Mystery an expert external facilitator with background in fine arts or humanities usually leads an intensive half day exercise. The same format applies to Subject Enrichment where expert facilitators are usually individual drama practitioners and theatre companies. The coursework for both modules centres around the keeping of a “reflective sketchbook” (Holtham, Owens, Bogdanova and Holtham, 2008). In the Business Mystery the module culminates in various artefact formats in a public end-of-module exhibition. In the PGCE culmination takes the form of practical workshops in schools. The course leaders participate as students/trainees if they are not facilitating a particular session, and at least one will actually produce the reflective sketchbook and coursework also.

The reflective sketchbook in the Business Mystery Module and Subject Enrichment was initiated through walking around the City (Holtham and Owens, 2007). Most notably in the Business Mystery through a set of exercises in the Hunterian Museum of Surgery, repeated as part of a first year undergraduate management course. Most notably in Subject Enrichment through free and informal experimentation with the notion of the derive (Debord, 1958), whereby trainees would engage in random acts of drift around a particular European city (Holtham and Owens, 2007).

The primary benefits to participants in both modules appear to be primarily at the individual level, often expressed in very graphical terms such as: “The sketchbook has made me reflect differently and I suppose with more ease. It has inspired me in to a different way of thinking and effected me positively as a teacher” (Drama trainee). “This module really brought the whole year together for me” (Business student). The benefits of artful inquiry to the majority of those undergoing management education and teacher education are becoming increasingly clear in our contexts, but the paper will address some of the key barriers to further extension, including accreditation issues, faculty and institutional concerns in relation to methods for both teaching and research, and the views of a potentially significant number of students uncomfortable with artful inquiry approaches.

### **Student/Trainees Views**

Students and trainees matter from many points of view. Most fundamentally on the MBA, are alumni likely to recommend the school? With word-of-mouth being such a key factor in school choice, this is of profound significance. On the PGCE, are trainees able to satisfy subject knowledge requirements in terms of school and HMI/Ofsted Inspection requirements and do they value and draw on their training and tools it has provided them with in the work place?

Secondly, there are the views of students while going through their courses, most typically as measured through detailed student evaluation forms. Do they feel they got value from the experience? Is it possible at m level in a professional context for most students/trainees to be aware of how what they are learning actually impact on the real situations in which they will find themselves in business and schools?

Management student views are often stereotyped as being over-focussed on rational approaches and PGCE Drama/Arts trainees conversely on non-rational approaches. Although the left-brain (rational) and right-brain (affective) dichotomy has long been criticised (Hines, 1987), it remains a convenient shorthand to create a spectrum of student attitudes (Marren, 2005) and we use it here accordingly.

Our own experience is that such stereotypes probably over-emphasise the dominance of left-brained students over right-brained in Management Education and Teacher Education. However, what is undoubtedly the case is that there seems to be a definite asymmetry in terms of vocalisation of those attitudes. Taking the most extreme left-brain subjects such as quantitative methods, it would be very unusual for left-brain oriented students/trainees to complain at having to learn the subject compulsorily. They may well complain about the lectures, about the difficulty of the subject and the amount of time taken up, but they will rarely complain about its right to be on the syllabus.

For subjects perceived as right-brained, and this can include those concerned with human resources as much as with arts-based approaches, there is a quite different situation. In this case, left-brained students may well mount what amounts to a campaign of criticism about the subject being compulsory. This may use relatively subtle methods, but will typically be conducted through the vehicle of course review. Words and phrases such as “childish”, “has no place in a serious school of management” (Management Students), “Give me a straight essay any time,”, “Felt like I was in primary school (sic)” (Drama trainees). The implications of negative student feedback on instructor behaviour is explored further in Hersch and Merrow (2005).

### **Reflection and Knowledge**

Much of M Level remains traditional transmission of explicit knowledge. However in professional areas there is a parallel need for practitioners to evolve their tacit knowledge. A

reflective sketchbook both enables some tacit knowledge to be articulated by the practitioner and its content can serve as a stimulus to the emergence of further tacit knowledge. The essence of M Level in this form lies in the interplay of tacit and explicit knowledge. We found it increasingly important to develop a specific framework to underpin the study of tacit and explicit knowledge processes in the context of reflective learning. There are several existing frameworks that we considered. One of the most robust has been developed by Orna and Stevens (1995). A generic learning framework is that of Kolb (1984) and a similar one has been developed by New (2005), which is particularly significant here since it was specifically developed in the context of drawing and journals. However, we somewhat reluctantly decided to develop our own framework, partly because we found it difficult fully to “explain” the fieldwork results through any of the above three frameworks.

We faced an additional dimension beyond the generic, due to the need as teachers to develop the skills of our own students/trainees in reflection, and therefore a need to provide them with frameworks which will help them both shape and make sense of their own experiences. So the second driver to develop our own framework was as an explanatory tool for supporting the next cohorts of students setting out to develop their own reflective sketchbooks.

The initial step in our framework was developed from Polanyi (1956) who argued for the importance of distinguishing between explicit knowledge, which is articulated, structured and made public, and tacit knowledge which is private and unique to individuals. Explicit knowledge exists in both the physical and virtual worlds. By contrast tacit knowledge is located in the mental emotional world. We then added our own key words. We believe the primary impact of explicit knowledge on tacit is when it acts in the stimulation of new or reshaped tacit knowledge. And the crucial connection from tacit to explicit knowledge is represented as articulation. This is the act of converting the mental into a physical form, whether words or symbols.

### **Tacit and Explicit Knowledge**

Tacit and explicit have long been important concepts in the conceptualisation of art, as can be demonstrated by the following two quotations:

“Art is the imposition of pattern on experience, and our aesthetic enjoyment is recognition of this pattern.” Alfred North Whitehead (in: Binyon, 1909, *L'art de peindre n'est que l'art d'exprimer l'invisible par le visible*).

“Painting is nothing but the art of expressing the invisible by the visible”  
Fromentin (ibid).

### **Sketchbooks as artefacts**

Sketchbooks clearly exist in the physical world (virtual for electronic sketchbooks), so represent explicit knowledge. We have already outlined our close interest in the extent to which sketchbooks represent articulated knowledge and can act as a stimulus to tacit knowledge. So far we have shown knowledge as primarily an individualistic endeavour, with the individual informing themselves. But in reality there is both introspective knowledge enhancement of the isolated individual, as well as the social construction of knowledge (Wenger, 1999). To this end our research has indicated that a very important aspect of a reflective sketchbook is the dialogue generated by the process of its construction and its use in presentation of explicit knowledge to third parties. And finally, individuals draw upon the work of others, whether orally or in reading books etc, and those activities are very often accompanied by note-taking, or annotation which can be either text based, or audio, still image and video. So the sketchbook becomes a visible artefact at the heart of the knowledge creation and sharing process.

Leonardo de Vinci (Kemp, 2006) saw a small sketchbook as an indispensable everyday tool: “you must go about, and constantly, as you go, observe, note and consider the circumstances and behaviour of men in talking, quarrelling or laughing or fighting together. And take a note of them with slight strokes thus, in a little book which you should always carry with you”

Alfred Hitchcock (Aulier, 1999) used a sketchbook as a core way of planning his films in very fine detail: "I don't understand why we have to experiment with film. I think everything should be done on paper... And I think that students should be taught to visualize”.

### **Types of reflection**

Our original idea was that different tools and technologies might be oriented towards one or other of the four processes of annotation, stimulation, articulation and presentation. But it became clear from the case studies that this was not the case. So we needed to develop the framework further, and this particularly brought home to us that there were essentially three broad phases involved in reflection. We initially called these “collection”, “basic reflection” and “deep reflection”, but due to lack of clarity between the latter two, we were forced to rethink. Our revised phases propose the base level to be “collection”, where formal information is accumulated but also much informal communication and listening takes place. The second phase is “digestion”, allowing what has been collected to be absorbed and mixed together. The third phase is reflection, articulating thought-through and synthesised ideas and concepts.

When using these three phases, the question then arises of how best to categorise tools. We have decided to draw on the well-know Convergent-Divergent spectrum (Ekvall, 1999). This shows that in the collection phases, the dominant tools tend to be divergent ones, while during the final reflection phase convergent tools predominate.

### **Emerging themes/issues**

Factors impacting reflection: After reviewing the case studies and developing the tacit/explicit framework and clarifying the three types of process summarised as collection, digestion and reflection, we moved our attention on to the more general conditions which could enhance or detract from the visually-stimulated reflective process in professional development, and identified seven factors with a particular impact

### **Factors impacting reflection**

#### **Motivation**

Motivation underpins and directly impacts on two key mental processes: inspiration and attention. We found in the sketchbook exercises enormous differences between individuals in the extent of their motivation; certain types of learners were reluctant, unable or not adequately supported to start a deeply reflective process.

#### **Inspiration**

By contrast other groups of learners achieved personal inspiration during the deeply reflective process, which had simply not been unlocked by more conventional transmissive educational methods.

#### **Location**

Geographical location might be thought be entirely in the physical world, but we believe that it is very much at the boundary of the physical and the mental. Being in “the right” physical, virtual or cultural space can have profound impacts on the creative process.

#### **Attention**

The problem of attention is being increasingly better understood. A reflective sketchbook, not least due to its affordances as an artefact, is capable of focusing attention, but will not necessarily do so.

### **Augmentation**

Our original title for this was “tools for thinking” – physical artefacts explicitly aimed at stimulating the creation of tacit knowledge. Computer technologies are widely understood as augmenting human capabilities – there is still a perfectly valid role for analogue technologies as well.

### **Accumulation of Information**

It is clear that the accumulation of data and information through note-taking is for most people a very important stage in the development of knowledge. Exactly how this note taking will proceed is very context and individual dependent, but digital cameras are of increasing importance.

### **Conversation/Dialogue**

Unlike many conventional digital documents, we observed that a sketchbook could very easily become the centrepiece of an oral conversation; they are easy to share and discuss.

### **Struggles in two separate dimensions**

As indicated above, promoting or forcing reflection and critical thought within higher education professional course contexts is by no means universally popular. A good number of our participants struggled at least some of the time with the unfamiliar physical act of handwriting and drawing. Some also struggled with the unfamiliar mental act of reflection. Others struggled with both. Yet sometimes those who struggled on both dimensions were at the end of the day nevertheless able to succeed in converting the tacit to explicit, and to also succeed in presenting their reflections in a stimulating physical form.

## **Different processes around sketchbooks**

### **One or multiple sketchbooks?**

If there are three types of sketchbook process as we outline here, then one of the issues that arises for both student and practitioner purposes is whether there should be different types of notebook kept, possibly even three for each of annotation, basic reflection and deep reflection. There is certainly a strong case to be made for differentiation at least into two types – “collection/annotation” and “reflection”, the latter combining both basic and deep reflection. Firstly, this clearly separates out the two processes in a physical sense. Annotation is concerned with collecting data and information. Reflection relates to the creation and shaping of knowledge. Physical separation encourages intellectual clarity about the two processes. It also signals to readers explicitly what the purpose of any given sketchbook is. It means that different media can be used for the two different purposes.

There is also a case against separate sketchbooks. Firstly, there are major advantages in having data, information and knowledge all co-located in one physical place. Secondly, conventions can be developed to differentiate within the book, for example by using the front of the book for reflections and the back for data and information. Thirdly, the authors of sketchbooks can be argued to be unaware at the precise moment of creation whether their notes and sketches are in fact annotation or reflection, and arguably the needs of the author are more important than the convenience of the reader. There are also issues of cost and practicality which relate to keeping and carrying two separate sketchbooks.

### **Does the analogue/digital distinction matter when it comes to tools for reflection?**

It matters to some people at present due to their relative skills in, or preferences for, analogue or digital methods. Each has strengths which are quite distinctive. Each has variants which are surprisingly different. There are cost and resource implications between analogue and digital. Our conclusion is that there is value in particular in encouraging a diversity of tools, rather than assuming that the future is only digital. The affordances of analogue and digital sketchbooks are summarized below:

### **Analogue Sketchbook**

Single, immediate, portable, tactile, bounded, ubiquitously instantly visible.

### **Digital Sketchbook**

Screen-based, complex, multi-dimensional, multimedia, power-dependent, infinitely flexible, unbounded, searchable, remotely accessible.

### **Inevitable move to a digital world?**

Increasingly in the education world of design, architecture and even fine art, some of the conventional skills of drawing and sketching by hand are being reduced in importance, not least as a result of the student's IT skills. Initiatives have even begun to emphasise the importance of analogue sketchbooks in such fields, such as the CLIP CETL (2007) Visual Directions initiative. It is therefore a matter of some interest to academics in those areas that business and education, both with very heavy digital dimensions, are actually now emphasizing the potential of visualization and reflection through analogue media. Comparison with e portfolios, with our experience of use of paper based reflective sketchbooks suggests that they may have some distinct advantages over text-dominated electronic media. In fact such sketchbooks challenge typed text as the dominant route to learning and communication (New, 2005), (Hickman,2007). Less formal and less structured methods.

### **Conclusion**

We have particularly been studying the potential of the reflective sketchbook to generate learning processes capable of stimulating levels of critical thought that are both postgraduate and professionally valued in the workplace. We have also considered the affordances of the artefacts used in the process of visually-stimulated reflection at M level, with specific emphasis on potential differences between the use of analogue media (such as paper sketchbooks) and digital media.

In addition to drawing on the literature of education of professionals, we have also drawn on the domains of knowledge management, including the rather specialised area of how diaries, notebooks, sketchbooks and journals can be used to develop both individual and collective knowledge.

We have identified a continuing role for both analogue and digital sketchbook tools to support reflective processes; it appears unwise to require learners to use one type exclusively. Experienced knowledge workers appear very much to need diversity and customisation of their tools for reflection.

It is common to record progress throughout courses in a relatively formal progress file, our findings suggest that less formal and less structured methods may well provide a distinctive and additional avenue to, in the words of the QAA (2001), "optimise the potential for individual creativity".

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