Drawing to learn: making the learning visible

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Images from Linette King “Collages in Evaluation: on using collage to reflect on progress during a professional doctorate”
1. Making your mark

Please “sign in” by drawing round your hand on the large sheets on each table and adding in and around this:

- your name
- your role and/or subject background
- any initial questions /ideas you bring to the session about drawing and learning in HE
How to draw a stick figure

1. 
2. 
3. 
4.  
5.  
6.  
7. TA-DA!
2. Putting yourself in the picture

- Draw a face or stick figure to represent yourself
- Next to it, draw/doodle something to represent your working context
- And just in case you might be thinking that this is all a bit childish...
- ...here’s some background and rationale:
• LearnHigher CETL is a partnership of 16 HEIs, representing a cross-section of the sector; focus on different aspects of learning development

http://www.learnhigher.ac.uk/

• Within LearnHigher, Brighton leads the Visual Practices learning area. This aims:
  – to improve understanding of the visual knowledge and skills required in different disciplines and how these are taught and assessed
  – to develop resources for students and staff

http://staffcentral.brighton.ac.uk/learnhigher
(or access through the main LearnHigher site)
Visual Practices

Welcome to the Visual Practices web pages

The term "Visual Practices" covers a very wide spectrum of visual, spatial and tangible knowledge and skills. These are not usually included in general study guides, but they are important in most disciplines, including science and humanities subjects as well as art and design. Typically, they include such activities as:

- observation and recording of visual data (e.g. during field visits, laboratory work or in clinical settings);
- demonstrating and learning technical procedures of all kinds;
- evaluation and analysis of visual evidence, and the ability to use this in developing ideas and arguments;
- visual research methods;
- effective use and understanding of visual communication (sometimes known as 'visual literacy').

This website is still very much a work in progress. Resources in this area - where they exist at all - tend to be subject-specific, closely linked to particular curriculum activities and not immediately transferrable to other contexts. Because of this, some sections of this site are mainly of interest to teaching staff rather than students, and include links to relevant websites, specialised research articles and to news and outcomes from projects funded by LearnHigher.
Examples of LearnHigher funded projects at Brighton

Brighton & Sussex Medical School: ‘Learning to Look’, a photography course for medical students to improve observation skills, visual diagnostics and reflection on their own learning.

Tourism (SSM) Students carrying out a piece of fieldwork to construct a visual narrative, using still images or video, in relation to Eastbourne as a seaside town and holiday destination.

Many more projects in geology, media, nursing, education, cultural studies, arts and architecture, design history, languages, social sciences....and the Big Draw@ Brighton – a university-wide programme of events to raise awareness of drawing as a tool for HE learning and research.
The Big Draw @ Brighton

• Aim: to encourage staff and students to rediscover drawing and explore the ways it can support learning and research.

• Brighton won the 2007 Drawing Inspiration Award from the National Campaign for Drawing. In 2008, faculty libraries held a own programme of drawing events.

• We hope October 2009 will be the biggest and best Big Draw@Brighton yet....

....... and maybe a Big Draw@London Met?
“Drawing a Day” sheets

• Designed for course projects and individual use
• Can be used as a sketch book – but also opens out to display all pages at once
• Aids chronological and/or spatial organisation (grid referenced sections useful for fieldwork projects)
• Students and staff found their own uses – particularly for planning and mapping
• Also handy for capturing group discussions - fold and take away
Purposes & modes of drawing

• Recording & description  
  – Observational drawing encourages attention, close looking

• Representing processes (eg through diagrams)

• A tool for thinking about ideas and visualising abstract concepts

• Access to ‘hard to verbalise’ experiences – useful as an elicitation tool in social research

The physical act of drawing (whether from observation, copying or even tracing or colouring) also helps to reinforce learning
“In my experience, the only way to be sure I’m looking carefully enough at something – particularly something with lots of detail – is to draw it. The vital importance of this is that there may be something new and unexpected there; unless I draw I won’t look carefully enough to see the unexpected.”

Adelaide Carpenter, Department of Genetics, University of Cambridge

Above: Drosophila cell, prometaphase stage

“..micrographs.. of serial very thin slices through a Drosophila cell getting ready to do cell division; what I’ve done is trace each section, with enough detail so I can fit adjacent drawings on top of each other in register, then put them together to make a three-dimensional stack. Finally I make a two-dimensional projection for my own visual pleasure.” from “Lines of Enquiry: thinking through drawing” exhibition, Kettle's Yard, Cambridge
(3. Quick looking exercise)

• Choose an item from your bag OR you can just draw your own hand

• Looking carefully at the object or hand and without looking at the paper, draw the object by following the outline with your eyes and tracing that movement with your pencil.
“As an engineer, sketching helps me think. My ideas about design usually evolve through rough sketches. These become virtual objects which invite criticism and refinement, Sketching becomes the language for conversation with colleagues.” Prof Philip Cooper, structural engineer

“I always preferred making full-size mock-ups in cardboard or wire... Where drawing comes into its own is on the factory floor, where you have to discuss how one piece could join another, or try and work out a modification...” Tom Dixon, furniture designer

Joseph Paxton first sketch for the Great Exhibition building, about 1850, pen and ink on blotting paper

Alec Issigonis: Sketch for the Mini
© British Motor Industry Heritage Trust
Rich Picture Analysis

Originally developed as part of Peter Checkland’s Soft Systems Methodology for gathering information about a complex situation (Checkland, 1981; Checkland and Scholes, 1990).

“The idea of using drawings or pictures to think about issues is common to several problem solving or creative thinking methods (including therapy) because our intuitive consciousness communicates more easily in impressions and symbols than in words. Drawings can both *evoke* and *record* insight into a situation, and different visualization techniques such as visual brainstorming, imagery manipulation and creative dreaming have been developed emphasizing one of these two purposes over the other (Garfield, 1976; McKim, 1980; Shone, 1984; Parker, 1990).”

Open University
http://systems.open.ac.uk/materials/t552/pages/rich/richAppendix.html

See also: Dan Roam 2008, “The Back of the Napkin: solving problems and selling ideas with pictures”
4. Visualising concepts

• In pairs; each choose a concept or process from your own subject area - preferably something that students have difficulty grasping - and use drawing (diagrams and/or pictures) and words to explain it to your partner (5 minutes each way)

• If you can’t think of anything suitable, draw the rainwater cycle or the workings of the internal combustion engine!
Understanding symbolic representation - different versions of DNA
5. Academic Pictionary

• Plenary brainstorm - common academic words and phrases?
• In small groups: invent ways to represent these concepts visually (15 minutes)
• Discussion - what do your chosen images/metaphors reveal about implicit meanings and assumptions?
• Invent a symbol for one of these words that students might use as shorthand in their notes (5 minutes)
Making knowledge visible

Creative Problem Solving

Most people think problems only occur in work, which mean their own brains. Visual thinking can often be a part of the problem-solving process outside of work or in creative thinking. Many of the ideas we have in our heads are not always seen as problems. So, the problem-solving process can be seen as a way of thinking that helps us understand the world around us.

Experiences in Visual Thinking

Robert McKim's 1972 research at Stanford University highlighted the importance of visual thinking in problem-solving. His work in visual thinking is now increasingly popular in business problem-solving and primary education. McKim's research focused on the process of visual thinking, which he called the Express-Test-Cycle (ETC). This process involves expressing ideas, testing them, and then cycling back to express new ideas based on the feedback received.

Advantages of externalized thinking:

- Provides easy review and understanding
- Encourages new ways of thinking
- Encourages group discussion
- Provides a visual representation of ideas
- Helps to see patterns and connections
- Encourages critical thinking
- Provides a platform for creative solutions
- Encourages collaboration

Research at Stanford University:

Robert McKim 1972 Experiences in Visual Thinking

Robert Horn http://www.stanford.edu/~rhorn/

Also increasingly popular in business problem-solving and primary education (Roam, Margulies)
The power of posters

• One of the LearnHigher Visual Assessment research projects (Cattaneo, 2008) explored student experiences of using posters as an alternative to PowerPoint to support presentations
  
  – 55% preferred posters as an aid to preparing their talks – more ‘hands-on’, suited to ‘work-in-progress’, and more interesting to prepare; remainder preferred the “logical, sequential” nature of PPT to organise their thoughts
  
  – when presenting, 75% preferred using posters, commenting: ‘I felt more focussed and in control’, ‘I remembered more’, ‘It was less restrictive and more creative’, ‘It was good to have all the information on view at the same time’.
  
  – when in the audience, 90% found poster presentations more dynamic and easier to follow: “allow the material to be displayed as a whole” “People seemed to be more involved” “There was discussion, rather than just questions & answers”
Mapping the Past - and the Art of Memory

Above: examples of group projects
left: Posters    right: Board Games

Below right
Art of Memory & The Theatre of the World from Robert Fludde's Utriusque Cosmi Maioris, 1619
Pattern notes

- Sandra.....
Reflecting on experience

Lackey ‘Using Art in Midwifery Research’

“A qualitative study, using illuminative art-work, exploring newly qualified midwives perceptions of transition from that of student to that of qualified midwife”

Visual Practices Conference, School of Nursing & Midwifery, University of Brighton July 2008
King 2008
“Collages in Evaluation”
SNM Visual Practices Conference

(on using collage to reflect on progress at end of each year of her professional doctorate)
Embodied Reflection

Above left: MA Inclusive Arts Practice
Initial session - ‘hopes and fears’
Below: from end of year personal development review

Above right: Access to Art Overalls Project
Reflections and forward planning

• In groups: create visual pattern notes/learning log for this workshop (A)
• Individually: illustrate your own ideas for using drawing and other visual approaches in future to support your students’ learning (B)
• Sketch in the journey between A and B – what do you need to do, who or what can help you?

Do discuss your ideas with each other – and use whatever visual metaphors you prefer for your journey....
Questions

• What contributions to learning and research could drawing and other creative/visual practices make in your discipline?
• How can we understand/research the relationship between sensory/embodied practice and conceptual development?

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Visual Practices website: http://staffcentral.brighton.ac.uk/learnhigher