

Drawing to Learn

# Business, Education, Law, Management & Social Science

Pauline Ridley and Angela Rogers



Visual Learning in Higher Education

## Drawing to Learn

Each of the booklets in this series is addressed to a broad cluster of disciplines and offers a brief introduction to the ways in which drawing and other visual methods may be used to support undergraduate and postgraduate learning and research. We hope the ideas and examples will encourage lecturers and supervisors to explore the possibilities in their own teaching. More resources, including downloadable materials and detailed guidance on the activities and approaches mentioned here, are available online at

**[www.brighton.ac.uk/visuallearning/drawing](http://www.brighton.ac.uk/visuallearning/drawing)**

## About the authors

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**Visual Learning in Higher Education** “Drawing to Learn” is one of a number of publications and online resources developed through the LearnHigher Centre of Excellence in Teaching & Learning\* to support the development of visual/spatial/tactile knowledge and skills in undergraduate and postgraduate education. These may include: observation and recording of visual data (for instance during field visits or in laboratories or clinical settings); evaluation and analysis of visual evidence; effective use and understanding of visual methods of communication and research. Further information and resources can be found at

**[www.brighton.ac.uk/visuallearning](http://www.brighton.ac.uk/visuallearning)**

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For further information and resources for university staff and students on many other areas of learning development see **[www.learnhigher.ac.uk](http://www.learnhigher.ac.uk)**

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Front cover: Angela Rogers

Back cover: Darwin's 'Tree of Life' sketch. Reproduced by kind permission of Syndics of the University of Cambridge Library

# Series foreword: How can drawing support university study?

Drawing and other visual practices have an important role to play in every discipline – not just those with which these activities are usually associated.

Drawing helps to sharpen **observation** skills, a vital element in many subjects, and enables rapid and accurate recording of key data in almost any situation.

Equally, **conceptual drawing** and diagramming requires students to make explicit and tangible their understanding of abstract or complex ideas and processes. By doing so, it provides a basis for these to be discussed, explored and challenged – a powerful way to develop critical thinking and reinforce memory and understanding. Visual approaches can also be valuable in cross-cultural student groups where linguistic uncertainty could cause misunderstandings.

The ability of drawings and other visual images to provide a trigger for discussion and dialogue means they can be used to develop **communication** skills, to encourage students to reflect on their own experience, and to explore professional and personal goals and plan for development.

The potential of images to encode large amounts of information economically also serves an integrating function. Images are fundamentally analogic, triggering a web of associations with familiar domains.



Judy Martin

Analogic thinking and visualisation are recognised elements of higher order thinking and contribute to effective **problem solving** skills (Kaufmann, 1990; Marshall, 1995). For all these reasons, image-based techniques are also valuable **research** tools.

Given these potential benefits, it may seem surprising that, in most subjects, drawing and other visual skills are somewhat underused and rarely taught directly at undergraduate or postgraduate level. A variety of social and historical factors lie behind this omission: a general undervaluing of sensory and technical knowledge which in Europe may be traced back to the rise of the academies between the sixteenth and eighteenth centuries; philosophical traditions which value the life of the mind over that of the body; and longstanding differences of status and income between 'manual' and 'intellectual' forms of work.

More immediately, school experiences often convey the impression that drawing, copying and colouring, while valuable as learning tools in the early years, should be left behind once reading and writing are established. At the same time, widespread (mis)conceptions about self-expression and creativity have sometimes deterred teachers from helping children to acquire basic drawing skills, an omission which then leads to lack of confidence and fluency. Consequently, many people arrive at university assuming i) that drawing is childish and/or irrelevant to academic work, ii) that it is something only artists do, and iii) that they themselves are 'no good' at it.

We need to challenge these beliefs. We expect all students to be literate and numerate even though few of them will become professional writers or mathematicians. Equally, drawing and other visual-spatial skills can be learned by anyone, at any age, to a sufficient level for most practical and conceptual purposes.

The barriers described above may make lecturers hesitate to introduce drawing into their own teaching. We hope this booklet and associated online resources will help overcome any such reluctance. The approaches described here and on the website have been developed and used with academics in many disciplines at different universities. They do not require specialist skills or materials and most can be incorporated into standard teaching sessions. We hope you will try them out and contribute your own ideas and examples via

**[www.brighton.ac.uk/visuallearning/drawing](http://www.brighton.ac.uk/visuallearning/drawing)**

# Drawing within Business, Education, Law, Management and Social Science

## Observation

*Seeing, being surrounded by the visual, doesn't always or necessarily mean that we notice what we see. (Weber, 2008).*

Being able to notice detail is essential for all the above disciplines as is being able to step back and see the 'bigger picture'; whether this be noticing the small print in a contract, observing a change in the behaviour of a group of students or being attuned to the shifts in social trends. Drawing is an effective way to develop observation skills because it forces us to pay closer attention to what we see.

In the past it was the only practical means of recording the appearance of individuals and objects. In commerce, printed catalogues were full of three dimensional renderings of goods for sale. The army used artists to prepare pared down sketches of battle sites to help soldiers recognise significant features in the landscape. Many of these functions have now been taken over by photography and film or video, but what has been lost in this move is the careful observation combined with critical scrutiny that looking and drawing involve.

Students often 'consume' images uncritically, and although taking their own photographs is an effective way to heighten visual awareness, drawing (directly or from photographic images) pushes us to look for longer. It prompts us to ask *'What is this I am looking at? Why does it look like this? How else might it look? How does it relate and compare to what else I know?'* For instance, making rapid sketches of people, directly if possible but also from memory, can help sharpen perceptions of body language and non-verbal communication.



Students who are used to drawing in an art context may aim for a pleasing image rather than an accurate and relevant record, while those lacking confidence in their drawing may rely on schematic representations of what they think is there. It is helpful to show them varied examples of observational sketches and discuss these in terms of what has been noticed rather than aesthetic qualities.

Give students plenty of opportunities to develop their confidence. Re-drawing after an initial sketch can push them to see in more depth and elaborate their original observations. Copying and colouring are also effective ways to learn to look and to reinforce memory. Copying removes anxiety about rendering a likeness and allows students to focus on structure and detail, and many people attest to the study value of the detailed specialist colouring books now available for adults; if none are available in your own area, students could use photocopied line drawings as a base.

For study purposes, drawing skill is mainly a matter of practice and reasonable eye-hand coordination, and is much less important than the ability to look really carefully. There are several widely used exercises, suitable for introductory sessions or practised independently.

One such is '**blind contour drawing**', where the surface on which you are drawing is masked in some way, to focus attention on the subject and the process of looking rather than the drawing as it is being made. The simplest way to achieve this is to push a pencil through a spare sheet of A4 paper and then hold the pencil below this, so that the paper conceals both hand and the drawing surface below. Now focus on the outline of the object being observed and while following it round with your eye, trace the same contour with your pencil without looking down or lifting the pencil from the paper.

Another common approach is to use a **viewfinder** (made by cutting out a rectangular 'window' in a piece of card) to frame what you are looking at and help concentrate on a small section at a time. In the same way, a **squared grid** overlaid on a source drawing or photograph will enable you to copy this more accurately and notice the fine details in each section. Other looking & drawing exercises offer opportunities to sharpen perception of variations in **tone, colour** or **texture**.

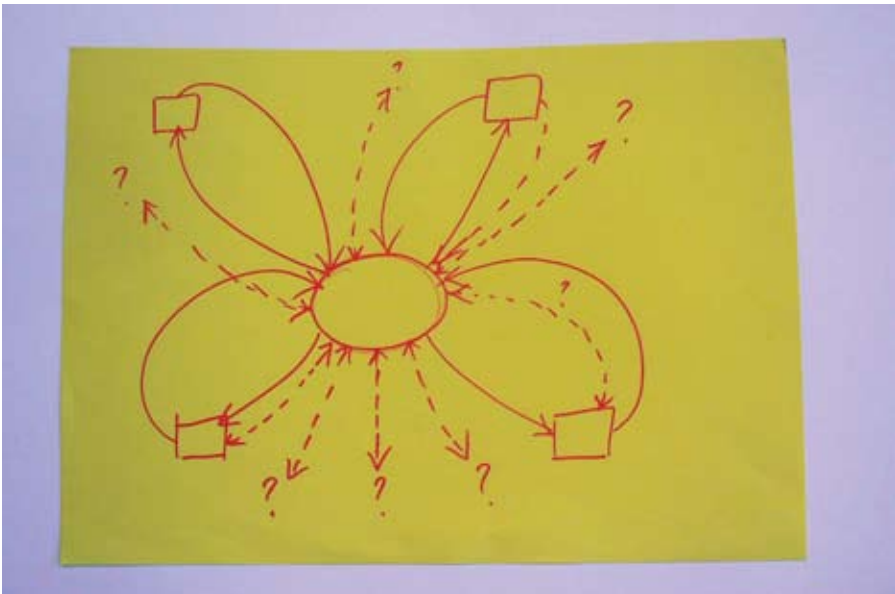
These basic exercises are effective whether or not the object of attention is relevant to the academic discipline. Indeed there is some evidence that observing unfamiliar material is beneficial, since ignorance of what is significant requires attention to every detail (Bardes, Jolev, 2002).

# Conceptual drawing, mapping and visualisation

In any subject, the habit of giving tangible form to abstract ideas is beneficial. As several studies (e.g. Brumby, 1984) have shown, students may reproduce theoretical knowledge accurately in written examinations, while retaining fundamental misconceptions that inform their day to day thinking. Drawing and other image-based work are excellent ways to reveal such tacit theories, assumptions and values.

You can get students to create **quick freehand drawings** or diagrams in class to represent **key concepts** or processes. This helps them to clarify their own understanding of ideas. The group can then compare and discuss the different versions, enabling them to explore ambiguities as well as correct any misunderstandings. Similar methods can also be used to explore management problems, ethical issues and organisational development.

Students in these disciplines will be familiar with graphic representations of statistics or organisational structures and other systems. However we should not assume that they always know how to interpret or use such images appropriately. Making their own versions helps to develop a more sophisticated understanding of the relationship between symbolic representations and what is being described.



**Mind maps**, especially when they include schematic images to represent individual elements, can help individuals or groups to build up a 'bigger picture' of complex systems or subjects. Recording group discussion on whiteboards or flip charts makes the thinking process visible immediately. Mapping can be used to develop and interrogate relationships and build theoretical perspectives. Unlike text which is read in a linear sequence, mind maps and diagrams allow a great deal of information to be apprehended simultaneously. Mind-maps are also useful as aide -memoires and tools for revision.

**Timelines and storyboards** Drawing gives us a way to investigate and play with the sequence of events. Standard formats such as annotated timelines and storyboards (short comic strips) can help students to visualise what may have happened in the past or to project into the future. For instance, they might imagine the history behind a company takeover or difficult personnel issue or imagine how a particular legal agreement might have an impact on different parties in the future. Such activities can help them understand the human factors in events and how cause and effect play out in the lives of organisations and individuals.

A4 paper and post-its are sufficient for this but if the teaching space allows, the whole group can create a giant timeline or story board on the floor or wall, using large sheets of lining paper. The physicality of such activities often reinforces the impact on learning.





# Developing other senses

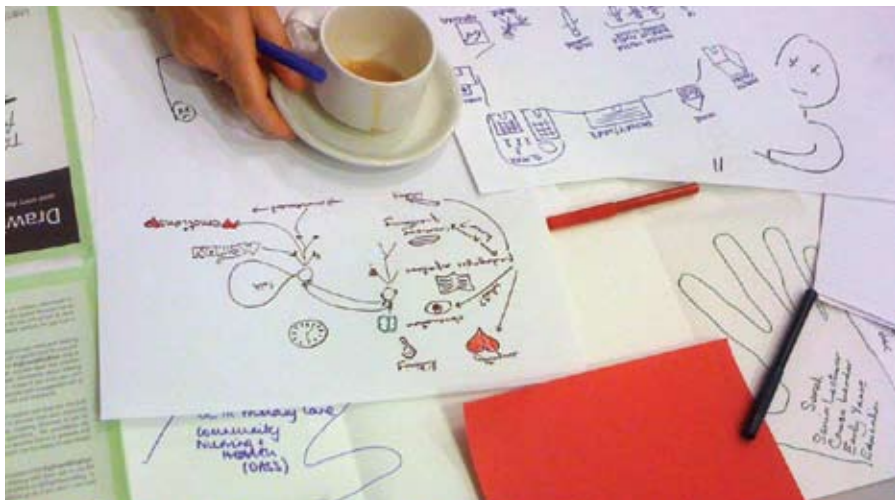
Although not necessarily a key area for these disciplines, developing other senses cannot help but increase students' ways of understanding. **Drawing from touch** enables a focused exploration of sensory knowledge. Place objects inside boxes or bags and ask students to feel these with one hand and draw with the other. They must discern the object through touch and then visually express what they feel on paper; moving from one modality to another will enhance their awareness of both.

Angela Rogers



Embodied experience gives access to more modalities of learning and more complex reflection; for example listening to music, poetry or prose whilst drawing can encourage students to be freer in their visual imagination. Drawing exercises, such as these may well play a role in developing innovative and creative thinking.

Pauline Ridley



## Collage

For most kinds of conceptual mapping and visualisation, basic tools such as pens, pencils and paper are enough. However, there are times when collage (constructing a picture by sticking images or other materials to a surface) can be even more effective.

Collage seems to work best when we move from the intuitive to the conceptual so it is an appropriate medium for exploring identity, ethics and professional dilemmas. You may want to provide images that relate directly to the subject matter of the session but this is not always necessary, as students will bring their own associations to quite random collections of material. Either way, it is helpful to collect images in advance from a variety of magazines or newspapers to give plenty of choice.

Ask each student to make an initial selection of images that relate to their beliefs or experiences or understanding of the given topic, or even just attract their attention for reasons that they cannot rationalise. They then combine and arrange these – according to whatever system of connections makes most sense to them – and stick them down on a large sheet of paper. If space is very limited, collages on postcards can also work well. In small groups, students then discuss their collages and may add signs and text in the light of these conversations.

A good way to extend collage activity is to make A4 or A3 colour copies to look back on at a later date or to cut up and integrate into new collages. This iterative approach helps students review their thinking over time and reflect on their own learning.



# Communication, reflection and dialogue

*More important than thought is what leads us to thought, impressions that force us to look, encounters which force us to interpret, expressions that force us to think. (Deleuze, 1964).*

For most of the activities described here, the greatest benefits come when the drawings produced are used as a trigger for subsequent discussion. Drawing can be used even more directly to develop the professional communication skills that are vital in these subjects. The sensations and emotions that drawing triggers may be more effective catalysts for deep and critical thinking than rational procedures, indeed sketchbooks can be used to elicit and share tacit professional knowledge (Holtham et al., 2008).

Using colour, expressive mark making and symbolic imagery, students can **explore experiences** through analogy and empathy. For education students, practising such activities for themselves develops insight as well as confidence about using such methods in their future work.

With any teaching activity that may elicit deep seated feelings, it is important to be clear in advance about why students are doing this and to agree guidelines on boundaries and confidentiality. Since there is no fixed language of visual expression, drawing offers a valuable element of ambiguity in interpretation. This enables feelings that are difficult or impermissible to articulate openly to be expressed and approached obliquely. Frustration, anger, disappointment and humiliation may be behind an image but are not necessarily apparent to other participants. Students can choose how much or little to elucidate.



**Collaborative drawings** are also a good way for a group to share hopes and fears at the beginning of a course and to review their progress later on. To explore beliefs about professional identities, ask students to discuss and draw – in and around a life-size outline figure – the attributes of the professional they aspire to become. This can help prompt discussion of whether these expectations are realistic (a variation might be to represent the ‘ideal’ client or student). As a follow-up activity, they could produce maps or other representations of the learning journey between their current state and where they want to arrive.

**Paired drawing**, in which each participant in turn adds to the drawing, building on each other’s contributions, is a great way for students to explore the dynamics of one-to-one communication. The lessons learned are relevant to their professional interactions with colleagues and to any kind of one-to-one work with clients, participants and students. One participant said they felt that they knew some of their colleagues better after a two hour drawing workshop than in the previous two years. In these ‘drawing encounters’:

*‘...the process of improvising the rules of engagement, and negotiating the shared territory, is made visible, and the paper becomes an arena for mutual reflection and collaborative inquiry’* (Rogers, 2010)

As we better understand the importance of dialogue in collaborative innovation (Leadbeater, 2007); any method that supports new ways to communicate and understand each other is of value in these subject areas. As a method, drawing has the advantages of being simple, mobile and inexpensive.



# Research

*It has become increasingly clear since the latter half of the 20th century that knowledge or understanding is not always reducible to language. (Eisner, 2008).*

In just the same ways that drawing can support learning and teaching, it is also a valuable addition to every stage of research, particularly those that involve participants or are dealing with emerging areas of knowledge.

Qualitative research in most disciplines still relies mainly on written or spoken language, with questionnaires, interviews and focus groups dominating most students' assumptions about research methods. However, visual methods are highly effective in helping respondents to access areas and levels of experience that may not easily surface in verbal form. They could and should take their place in the researcher's toolkit.

As with any other research process involving human subjects, normal rules of ethical procedure and informed consent apply. We must also stress that the aim here is not to produce images to be interpreted by the researcher but to use them to prompt and support meaningful conversations.

At later stages of the research process, any of the visual methods discussed in previous sections can help the researcher to explore emergent theoretical insights. The page from Darwin's notebooks, in which the words 'I think' are followed by his first-known sketch of an evolutionary 'Tree of Life', is a particularly famous example, but others can be found in many fields (Phipps, 2006).

Most researchers will have times when their thinking is 'stuck' or they feel they have reached a dead end. Using visual analogy to explore this situation can reveal unexplored avenues or identify insights previously unrecognised. Here the associative potential of collage is especially helpful (Butler-Kisma & Poldma, 2009).

Visual representations may also be used to communicate research findings. These need not be confined to charts and other graphical forms of quantitative data or conventional research posters. More informal or expressive modes also have the potential to help generate new forms of knowledge and understanding.

*An image can be a multilayered theoretical statement, simultaneously positing even contradictory propositions for us to consider. (Weber, 2008).*

## Final thoughts

We hope that the suggestions and examples in this brief outline will encourage you to consider incorporating drawing and other visual methods into your lectures, workshops and other teaching sessions. Our experience, and that of the colleagues with whom we have worked over the past few years, is that most students really appreciate the excitement and energy that comes with using active visual approaches in an academic context.

We would emphasise again that most of these do not need elaborate preparation, specialist materials or unlimited space and time. However, like any other teaching strategy, they benefit from thoughtful planning and selection of the most appropriate activities for each purpose, and sufficient time for discussion afterwards.

It is also worth spending a few minutes explaining the rationale for what you are asking students to do, so that they understand that what may seem like 'play' has a serious purpose. At the same time, aim for a relaxed atmosphere so that anxiety about perceived lack of drawing skill does not inhibit anyone's ability to participate fully.

Wherever possible, keep a record of drawing activities and the images produced, so that students can revisit these later. Digital technologies have made it very easy to take quick photographs and upload them to online sites or virtual learning environments (VLEs). Giving students the chance to do this for themselves aids their ownership of the process. Reviewing the images helps to re-activate memories of the session and reinforce students' learning, while printouts, with comments and other additions, can usefully be included in reflective journals or portfolios.

The website associated with these booklets contains more detailed descriptions and tips for running particular activities, along with downloadable materials, case studies and links to further reading and resources. We hope that you will find these useful and that you will contribute to future debates about the role of drawing in higher education, by sending us your feedback and suggestions via the website

**[www.brighton.ac.uk/visualllearning/drawing](http://www.brighton.ac.uk/visualllearning/drawing)**

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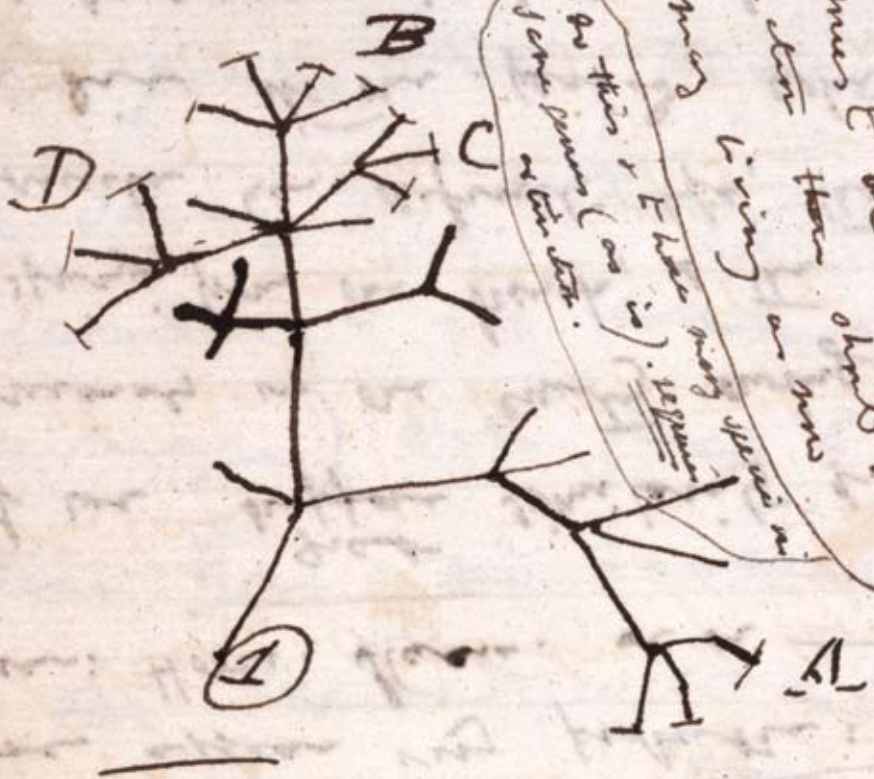
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