Teaching drawing

Philip Tyler

I'm sure many people have a belief that the world is divided into those people who can draw and those who cannot. I had a similar belief when I first started teaching thirty years ago. Some of my students could and some couldn't. It was easy to teach those students who could draw and avoid those who couldn't, the naughty ones in the corner of the room, until one of my older colleagues suggested that the naughty ones were the ones finding it difficult and they were the ones that needed teaching. A sobering comment and one I have taken on board ever since.

About twenty-five years ago, my whole understanding of drawing was transformed when I read Betty Edwards' "Drawing on the right side of the brain" which I devoured in a day. Not only did it make sense of all of those drawing exercises I had done at art school, it also made me realise drawing is not a gift that you are born with it is a set of motor skills and perceptual functions.

All Victorian ladies drew because they were all taught how to draw. Anyone can be taught to draw, you can learn in less than one day, sometimes in a matter of three or four drawings. To really hone your drawing skills (once you have learned a few of the basic techniques), can take the amount of time it takes to drink a cup of coffee. Fifteen minutes is all you need; fifteen minutes a day, most days and your students drawing skills will improve immeasurably. So a simple question then is do your students have a spare fifteen minutes and the motivation to use that time?

Lesson one

We may take for granted the ability to use our eyes, but we seldom do we consider how difficult a process seeing is. Each eye sees two slightly different views of the same view. The images appear at the back of the retina inverted and through a layer of blood vessels. The light sensitive cells deal either with colour (the cones) or light and dark (the rods), converting this information into electronic signals which are sent to different parts of the brain. The left eye sends information to the right hemisphere of the brain and the right eye to the left. Each hemisphere has its own visual cortex, which translates the visual information into our understanding of what we are looking at. Did you know that you have a blind spot in each eye and that the brain, rather like the cloning tool in photoshop, cover this up?

Reading Oliver Sachs "the man who mistook his wife for a hat" reveals many of the ways in which sight and brain do not always work together: someone who failed to see the left hand side of things. In phantoms, a patient wakes in hospital to discover that someone has left a dead leg in his bed, distressed as to why would someone do this, he throws it out, to discover the limb is attached to him. In this instance the patient failed to see the limb as belonging to him, although must have clearly seen the limb. Another patient could not recognise things at all, Sachs himself suffered from prosopagnosia, a condition where one cannot recognise the difference between peoples faces, a fate also shared by him. In this instance the patient failed to see the limb as belonging to him, although must have clearly seen the limb.

Fluffy Lines

In the last year I have been experimenting in my drawing classes, setting an unattended first drawing. I ask the students to draw the model for 10 minutes. I ask them to choose their media and approach and then proceed to watch them. How long do they look at the paper against how long do they look at the model. What drawing habits have they formed, are they making lots of sketchy lines, roughing in the figure. Are they frightened to make a mark, and how good is their existing set of skills? I use this drawing as a datum, a point of measure to judge subsequent teaching and learning.

The drawing problem is not with our eyes but with our brain and how we process visual information. If we can change the way that students think about what they are drawing and focus on the idea of shape rather than object drawing, (where we bring to bare what we know rather than what we see) and we use various strategies to increase our chances of the student succeeding, then their observation will certainly improve significantly. Once I have described some of the theory and used some of the examples from Edward's book to demonstrate the impact that her teaching had on adults, I will then usually introduce some of these simple concepts.

Memory

Unless you are Stephen Wiltshire, most people's visual memory is quite poor. I ask students to draw a parent from memory. I allocate about five minutes for this exercise and witness a series of largely childlike drawings emerge, utilising what Gombrich refers to as schema, the sign systems for things that we develop from childhood to the age of about nine. I then point out, that if they have just left home, they have probably seen that parent for at least 1 hour a day for all of their life. So that equates to 19 x 365 = 6935 hours, which on turn becomes 42,6100 minutes and with all that visual experience, they cannot draw that parent from memory, so why is it, that when they draw from direct observation, they spend longer looking at the paper, rather than at the model? Most people tend to glance at a subject and spend longer looking at their drawing. I have counted a student look at the model for one second and their sketchbook for up to half a minute (and sometimes longer). A good student may look at the model for one second and their page for four. I will point out that they have therefore looked at their sketchbook for eight minutes and the model two, so they are using memory to make a drawing and drawing what they know, rather than what they can see.

So if this could be reversed and one spends longer looking at the subject rather than the support. This will certainly help improve the quality of looking.

Slowing down

Many students look casually at the subject, taking on too much information at once, drawing chunks of the subject. This can be revealed in the quality of their lines, which tend to look at bit like pen tool lines in illustrator. If the student slows down, drawing 1mm at a time, becoming lost in the minutiae, they will notice much more and this is reflected in a line that takes on board all the idiosyncrasies and changes of direction that is in the subject. I discuss the idea that if you visualise yourself as an ant, crawling across every crease and fold, every contour and change of plane, your hand will follow the pathway of the ant. Ants are not very good when it comes to using a trapeze. So drawings should be built up over very small distances, the ant should move slowly gradually navigating across the landscape, rather than jumping big distances.

Error margin

If ones ability to measure a distance is inaccurate, (we might give it a figure of 10% plus or minus either way), we can minimise the error margin if small distances are travelled in a drawing. 10% of 1cm is much smaller than 100% of 30cm. By encouraging this

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1 Bill Randall, taught at Richmond upon Thames College and died in 2015 aged 95
2 Drawing on the right side of the brain was originally published in 1979 and had sold more than 1.7 million copies, had been translated into 17 languages
3 Stephen Wiltshire, the autistic savant, born in 1974 who is able to drawing whole cities from his visual memory
4 Ernst Gombrich, Art and Illusion. Originally Published in 1960. Schema is a term relating to the development of sign systems in children's drawings
approach, rather like a jigsaw in reverse, where one starts with the middle shape, and then tries to find the next shape that fits that has a marked impact on their drawing.

**Circumnavigation**
By going the long way round, by drawing the creases and folds or changes of plane, one is also using a strategy to avert ones attention away from the object being drawn. To see it as a series of interconnecting shapes as opposed to a thing means that you are more likely to draw it without your preconceptions to draw it accurately. I discuss the idea of jumping skip, moving from drawing one leg, to another and then into a hand, trying not draw an object in isolation, but instead drawing a place where an number of different objects configure together, a lattice of interconnecting shapes.

I recently borrowed an idea from Betty Edwards and projected an upside down image of a Howard Tangye drawing, to large group of students (100+). I placed the image into a square grid of 4 x 3 squares and set the presentation up in PowerPoint so that only one square was revealed at any one time. A map for the location of each square was provided on each slide, and drawings were revealed over a duration of ten minutes each square was drawn in turn by the students. For the most part the drawings made by the students were well seen\(^5\), and the placement of these lines in space was accurately recorded, apart from the final slide, which was where the head appeared.

Once students knew what they were drawing, their ability to look objectively at the configuration of lines and shapes was lost, and the features became distorted.

**Blind Drawing**
This process of looking more slowly, taking time, noticing every change of direction, every inflection in the line is best achieved by getting students to use blind drawing. I will usually get them to produce a series of blank drawings, of 10-minute durations, reminding them all that it is not the outcome that they should be concerned with, (although beautiful drawings often emerge), but rather these drawings are about training the eye to look in the right kind of way. When these drawings are complete I will usually get the students to reflect on the value judgements they are making and whether the drawings should look like anything at all. Instead if they look at the drawings to find inspiration for a number of design-based outcomes, textile designs, forms, imagined landscapes etc, their perception of the drawings value change.

**Partial Peek**
If not looking at the paper improves the ability to see, then how do you get the lines the meet up? The answer is simple, look a little, but use the same strategy of looking and drawing, ensuring that the eye spends longer at the subject than at the motif. Partial peek drawing develops this approach, it can be useful to experiment with he length of time of the pose, a fairly satisfactory results are usually produced in ten-minute duration up to 20. In terms of the teaching it is useful to reiterate, slowing down, looking more carefully, circumnavigating the object being drawn and here demonstration can be an effective tool (I have both a video on YouTube and student central) to demonstrate the approach in action, as well as using my own sketchbook when teaching.

It can also be useful to control how often the students look. It seems that the process made with blind drawing can go backwords with partial peek, resorting back to old ways. By limiting the time spent looking at the drawing, and focussing much more on the subject, better results are normally achieved. After four or five partial peek drawings it can be an interesting point to introduce the notion of drawing wrong handed.

**Timed exercises**
Here some of the exercises of the previous session can be quite useful to utilise, as faster drawing requires a more acute consideration of the silhouette. The emphasis may stray away from the minute, to capturing the essence of the pose the fleeting gesture and general configurations of limbs and torso. It can be useful to encourage the use of different linear media: biro, fine line pen, stick and ink, coloured pencil. It can also be interesting to get the student to use two colours of pen in the hand at the same time. The duality of line makes it very difficult to focus on the drawing being made; instead the student has to focus more on the subject, again helping improve observation.

A general truism that I have observed is that the longer a student has on a drawing, the more likely they are to draw the proportions incorrectly. It is like they settle into the drawing, relax, and switch off, I think it’s also true to say that the level of concentration is high in partial peek and blind drawing and the problem of sustaining that level of concentration over a longer pose is at the heart of the problem. In much the same way as students get talkative and restless as they find the exercises mentally tiring. What I think it’s certainly true of younger students it’s that they haven’t learnt from an early age to deal with boredom and concentration. Changes in technology have meant that everything is fast; food, music, internet connection and education has become instantaneous. Every minute scheduled with another learning objective, a tick box mentality. Even art education, where once a foundation student applied to university in March, six months into their course and had the chance to play, discover, make connections, learn and define their choice of specialism, now it’s little more than one term (and that’s not even 5 days a week)\(^6\). So the pressure it’s on to produce work that looks more like art, at the detriment of basic skills.

How many?
When I ask 200+ foundation students how many observational drawings have you ever made? Over the last 10, years the majority have made less than 50 and very few indeed would have made more than 100. Why learn to draw, when Adobe shape on your smart phone can do it for you? Why learn colour theory when Kuler can provide you with a colour palette? Why learn to use a jigsaw on the laser cutter can do they work for you? Perhaps there is something on the haptic nature of doing, the connection between

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\(^5\) Although some students did not draw squares but rectangles which meant that they distorted their drawing, and some lost their place on the grid

\(^6\) Before I started teaching, the average student did 36 hours per week taught time. When I began it was more like 21 hours, and now the average FT student does 12hours per week. Two groups added together then makes for 24 hours, which of course will be why I member of staff is teaching 44 students on their own
the hand, the eye and the brain, that begins to make sense of the problem, the employers the individual. Will all have access to that laser cutter after art school? Perhaps there is something about developing skills, training the eye, providing an opportunity to demonstrate that knowledge has been acquired. Which may explain why courses like LARA, George Cecil and Heatherley’s have become more popular in recent years.

Review
As a life class develops I will often get students to put down their sketchbooks and review each other’s work. It seems really important for them to step outside of themselves, ad see someone else’s work afresh. Is there an improvement in observation, from the first untutored drawing? What are the qualities of the drawings that have been made and how might these be applicable to their own practice? One of my colleagues recently asked a group to draw their hand and one student promptly got their phone out, photographed their hand and drew the image on the screen. So the translation of 3D into 2D is difficult, and it is much easier to translate 2D to 2D, but if the student can see that they have progressed, that the quality of looking has improved this can be a tremendous boost of confidence, especially in this students whose skills are weaker.

Measuring time
So if the proportion does wander when the time increases, teaching systems of measurement have their place, whether gridding, sight sized or proportional measurement, the challenge is to provide insight into how one sees and what one looks for.

For a number of years I have made students spend two days making a drawing in ink and tippex, from a complicated still life of upturned tables and chairs. The focus very much build on the same principles as before, working through the small spaces, discovering the larger objects by accident. This sight size drawing utilised a measuring tool, two plant labels attached with a paper fastener.

The students have to work through the pain barrier, through the process and learn that sometimes they need to destroy to move the drawing forward. Sometimes as little a few centimetres square have been drawn on the first day, but I reiterate that the drawing itself is less important than the learning-taking place.

Whilst this may seem challenging the penny usually drops on the second day and beautiful drawings emerge. As the space becomes so dense and flattened, I suggest that masking tape is applied to the background layers, so whilst the paper becomes more physical on the background, the tape reduces the visual contrast of the line making it recede.

Viewfinder
Last year I carried out another experiment, getting students to make a viewfinder out of cereal packet card and thread a grid into it. The viewfinder was attached to the easel and the idea was to look through it at the model. I took the idea from the draughtsman’s contract. The exercise didn’t work as well as it could, but it did highlights few perceptual problems, one, the ability for the student to remain in a relatively fixed position. Two, the size of the grid itself was often far too big for the distance away from the model, three, the grid was not always at right angles to the line of sight which mean that it was next to useless as a referent as the grid itself became visually distorted.

Two L shapes can be used more effectively to capture the space around the figure, understanding how tall and wide the figure appears. This can be particularly useful when making sense of foreshortening. By marking equal distances on the viewfinder it is possible to understand the mathematical relationship between these two distances (height and width) and consider where the figure itself aligns to these portions, it becomes much easier to draw the figure at any scale.

Basic shape
It can be described a bit like making a black paper silhouette. What would be the rectangle of black paper that the figure would fit in? What edges can be sliced off, making a basic shape? Where will the smaller shapes fit into these larger ones?

Drawing with charcoal very lightly can be a very useful approach as it becomes really easy to modify the lines. If one looks at the Atelier approach, something similar is used, in that the subject is fast drawn in straight lines, with not attempt and thinking about curves. The basic key changes of plane are identified before any consideration of more developed drawing. The use of simple geometric shapes can be advantageous as well. I recently projected a series of fashion plates and asked the students to simplify the figure down into a series of circles, triangles, squares and rectangles. I worked really well getting students to understand the figure (or any object for that matter) as a set of basic units.

Taped up
Two years I delivered a series of programme of study, extra curricular sessions devoted to addressing the problem of teaching the basics of drawing to large groups of students. How do you try to teach 90 student in a room with very little resources, just a big enough space to put them all in?

I threw together a series of PowerPoint presentations, which had hyperlinks to video content I had found online and also some I have made myself. These events became talking points and exciting challenges and were well attended. Students reported back that they had learned a great deal and I was pleased with the results, the outcomes of the performances, in some instances sketchbook work and in others large scale drawings.

My opening lecture addressed my findings from Betty Edwards and introduced the students to the problems of Visual perception. I divided the 90 odd students up into small groups about 5 in each group, and I gave them a laminated sheet of a linear drawing, each sheet containing a different drawing, but each sheet having two copies of the image, one of which was gridded. Using cotton reels, black insulation tape, scissors and scalpel these students worked collaboratively over a period of two hours to make large scale drawings which were attached directly to the studio walls. It was surprising how few knew about the use of a grid to enlarge an image but it was also surprising how beautiful the drawings were that were made and how much the students gained from this exercise, not just in terms of team work and collaboration but also in terms of applying the theory they had learned from the session.

This can be a really good way of introducing painting and can be further extended when one considers the application of the paint itself. A colleague of mine demonstrated this, when he produced a series of negative paintings of a washing line, using a combination of thick and thin washes and impasto surfaces. The way in which the paint behaved, the pools of thin colour creating rich textural effects was very exciting, and images

7 Peter Greenaway’s The draughtsman’s contract originally released in 1982, shows the artist making a series of drawings of Groombridge place, using an elaborate drawing device.
The use of negative space can be very valuable, in the sense the taped line created negative shapes with the grid. At the end of the session the following day the students were asked to paint up paper black and then using white paint, to paint the white positive shapes around the lines. Something similar was done a few years ago, getting students to make intercutting collages out of black and white paper, creating little landscapes out of the tape drawings.

**Measure**

In another programme of study lecture I introduced other concepts like measured drawing, tonal drawing and drawing as process. Measuring became somewhat problematic when I realised that due to the large nature of the audience, many students was seeing a foreshortened view of the projection screen, meaning that rather than relating the figure to a square, a rectangle and its subsequent divisions, they are seeing a trapezium or a perspective rectangle. However this became an interesting talking point during the session.

**Methods of measuring**

Why measure? In a feedback session yesterday when, I asked students what did they find difficult in drawing and what did they need help with, the great majority stated that proportion was an issue that they needed help with, as well as where to place tone. So what is measurement? There are a number of different measuring techniques discussed in books and from my practical experience, these are: sight sized measurement, proportional measurement, (which can incorporate triangulation, point and carry and basic shape sometimes called relational measurement) and gridding. In sight size drawing is made to be the same size as the visual size of the subject. A sight size drawing is usually made smaller than the object being drawn, due to the size of teaching spaces and proximity to the model. If student work at an easel, it is useful to place the easel in such a position as to minimise the distance between the drawing and the subject. For a right handed student, the easel is best placed on their right, and left for left handed students. That way, as the student draw, their vision is not interrupted away from the subject and the student can virtually trace what they see, taking measurement across the horizontal directly to the drawing. If working at a chair, or donkey, then vertical measurements are taken downward onto the drawing, making sure that they Line up. In both instances, any movement of the head, or body will alter the measurement, so it is worth recording the position of easel, chair and body. A useful trick here is to line up something in the middle ground with the background. That way when the student comes to take a measurement they can ensure that their eye is always in the same position. Euan Uglow went to elaborate lengths to ensure that his eye was always in the same position, by hanging a plumb line from the ceiling and by having string string between two vertical uprights, he was able to fix vertical and a horizontal. Some students naturally rest their head at an angle and this will cause leaning figures and angles. In the Atelier method practised at George Cecil school in Florence, a method utilised by Singer Sergeant at the turn of the century, the model and easel are placed side by side and the artist stands back and assess both. Making mark on the canvas and stepping back to assess whether mark are figure correlate. This backward and forwards motion continues, (and one can see why Sargent painted with brushes attached to a fishing rod), establishing the big shapes first, established with straight lines, a simple delineations between dark and light before more refined drawing commences. Of course if the model is near the student, and the drawing is behind, a sight size study will be bigger than life. On proportional drawing one can draw at any size. However the key to the drawing is the establishment of a scale. How big is the drawing, or more importantly, how big is one part in relationship to everything else? This could be vertical against horizontal, how high is the object being drawn against how wide. This results in a box surrounding the object but visually touching it sides. This box can be understood by bringing a vertical line (pencil, knitting needle, bamboo skewer) to the far left and far right seeing where these points touch, and comparing that to the horizontal points. By taking the shorter side and comparing that to the longer side a sense of the boxes proportion emerge. The drawing can then start with a box in the same proportion. One can think about the box as a derivation of the square, so care is taken to calculate the longer side in relationship to multiples our divisions of the square where the shorter side becomes the unit. One can then think about halves, quarters and thirds of this distance. Marking off these measurements on a bamboo skewer can be useful, by moving the measuring stick backwards and forwards one can make the stick the same visual size as the subject and then one can look at what lines up to these. With the unit of measure, a part of the subject is used to calculate the rest of the measurements of the subject, for instance how many heads go into this? It is important that horizontal measurements are compared with vertical ones, as these tend to be perceived differently, especially if the drawing plane is not perpendicular to the line of sight.

**Gesture**

Taking an idea from Robert Kaupelis’ book experimental drawing it is incredibly valuable to introduce students to the concept that they could draw a whole figure in a maximum number 5 brush marks.

For most students this is completely different way of drawing and gets them to think about the notion of the arm movement, the size of the brush as a way of creating a series marks of varying widths, where these widths approximate to the size of the limbs and the torso. (This of course can be applied to a range of everyday objects)

I get the students to rehearse their marks in space for a minute, like a conductor swinging their baton in the air, manipulating the orchestra. The students practice their gestures in mid air before committing themselves to a mark. They have to think about the beginning and end of the brush mark, like a piece of zen calligraphy, before they execute the drawing. This has been practiced a number of times, before they then proceed to make more marks, either adding linear marks into the gestures trying to add information that isn’t contained within the brush mark, or adding tonal layers. It is useful then if the medium is somewhat semi-transparent, enabling the glazes to lay over each other without becoming invisible. It is also important that the colour is not so light that it becomes almost impossible to read.

**Value**

It is clear that tonal drawing presents students with an enormous challenge. Many students find it difficult to understand the global overview of tone, seeing edge differences but not the relative values across the subject. Perhaps an example of how students find tone difficult, can be given for about 15 years ago. I was introducing students to basic geometry and got students to make three card geodesic solid constructions. These tetrahedrons and dodecahedrons were painted white, grey and black each of these objects were used to form a still life. The students worked on these drawings with charcoal and chalk on grey paper and at the end of the exercise some beautiful drawings of the objects were on the wall, carefully seen and measured, but in none of the drawings could you tell which was the white object, the grey and black. So whilst the student could recognise that one plane next to the other was lighter or darker they found it very difficult to see the range of tones across the white in comparison to the black in comparison to the Grey.

Ruskin, in Elements of drawing, suggests that a student can cut a very small hole out of mid grey paper (a few millimetres apart) This is held up against the subject, and a spot of tone is compared to the mid grey background. By painting up a white to black greyscale and attaching this to the viewfinder, it is possible to better tonal match what you are looking at and help your judge the breadth of tone. Of course a monochrome photograph can be taken on a mobile phone and dramatic lighting with a plain background can further help in simplifying the problem. If you have students who are shortsighted it is useful to ask them to draw without using their glasses. Here the lack of focus helps them see the tones more clearly.
Stark Contrast
I have found that significantly reducing the choice helps. The notion is a useful concept here, if one can only use black where is this black? Is the object light against a dark background or vice versa? When I did my programme of study session I prepared images using Photoshop, changing the levels quite significantly to simplify the tones down. I asked the students to paint the black shapes and avoid drawing them in outline first.

Students were asked to prepare their sketchbooks in advance with different painted grounds (black and grey) although many left it to the last minute. They experimented with white chalk on black paper, black and white on mid grey, all from imagery that had been manipulated with the cut out filter to significantly reduce the tonal range of the image.

I also experimented with the use of croquis café\(^9\) a series of videos of Life models posing and in half an hour 90 students were all drawing short life drawing poses without a model.

In a recent drawing class I did an experiment I asked all the students to get out their mobile phones and turn in the opposite direction, away from the model. They held her mobile phone in their hand looking at the muted reflection in the black glass. They proceeded to draw the figure from that reflection and produced some really sensational tonal drawings. Of course this is not a new idea, as it is a modern take on the Claude glass, but it provided an opportunity to explore another way of treating tone.

In order to help students with their tonal work I have researched and printed a series of head images that have been painted largely in a variety of tones (all on my Pinterest resource of over 18,000 images)\(^10\). Once again I have made a series of Laminates, this time with a wide variety of painted heads. I have chosen artists that have clearly demonstrated a breadth of tone in their studies. I have provided the student with a colour and black and white version of the same image and I’ve also gridded one to help with proportion.

In a single day a large A1 charcoal drawing is made (which is supported by one of my demo videos) and an A1 grisaille using oil paints on an acrylic grey ground. The following week once the painting is dry I get students to glance into these grisaille paintings producing a full tonal colour painting. This strategy of working tonally with paint gives a bit more development of tonal understanding and it’s relationship to colour.

Tone can be explored through a series of different tonal techniques including layering of washes, hatching and cross hatching as well as erased charcoal. I asked students to carry out a project this year where they had to photograph an everyday object in a number of different lighting conditions, and then make tonal drawings of these using a wide range of drawing and painting emida. Grisaille is a great way of introducing painting as it simplifies the problem down. One of the common mistakes in painting is setting too any problems to solve, drawing, composition, scale, tone, colour, medium, facture etc.

There are of course other underpainting techniques including bistre as well as verdaccio\(^11\).

Verdaccio collage
One thing I have done with students for a long time now is encourage them to mix up variations of black white and yellow ochre producing an extensive range of collage papers using old newspaper. Using a Euan uglow painting as a subject they have been asked to make the cut collage from this introducing them not only to the possibilities for limited palette, they see first hand the wide diversity of colour that is produced from their own and others. Uglow is really useful as he reduced everything down into flat planes.

When doing the collage from the Euan uglow it is really useful if the students do not draw on the collage paper, instead work directly with the scissors and scalpel to cut the shapes, so that drawing is seen to be something done with these instruments rather than something applied to paper. A common collage technique can be mosaic collage which can be a pretty time wasting activity. Instead get the students to think about the large planes and it is sometimes useful to work from the background to the foreground placing the biggest shapes in first, leaving the small fiddly bit of paper to the end. The yellow ochre combinations are generally warmer than the grays. Placing grays in the background and yellow ochre combinations in the foreground creates visual space.

The collages can be used as a starting point for stencil making but I also provide really exciting visual sources for palette knife painting, again utilising a limited palette. In this instance it may be useful to remove black and replace instead with raw umber raw and say phthalo blue. The combination of the brown and the blue produces, a black that introduces a much more complicated system of colour.

A similar thing can be done in Photoshop using the cut out filter. It can be quite valuable to translate these images into stencil prints using cereal packet card or acetate and hand printing through the stencil with a stiff hog-hair brush or sponge. It can be a great way of getting a lot of students to produce a lot of work in a short space of time and act as a fantastic introduction to screen printing later on.

Drawing in space
Paper itself can be used as a drawing medium drawing with the scalpel and scissors to cut, fold, score, crease or emboss, producing changes the paper surface. I have encouraged students to draw directly in paper, again not utilising any pencil drawing on the paper, in one of two ways, either as a flat low relief surface where the changes in subtle plane describe the form, or working in the round, more like pattern cutting, where one thinks about cutting shapes that bend and fold around space, creating forms and structures I have done this from both a live model as well as from a two-dimensional image. These paper structures can then be photographed under varying light conditions where the resultant images can then be translated into paintings utilising different techniques such as opacity and transparent painting techniques, using acrylic rather like watercolor or opaque painting techniques, painting on colour grounds for instance scrambling on a black background.

Developing this further, a couple of years ago I did a project where I encouraged students to draw from a laminated sheet containing five still Life paintings. The students had to produce drawings of these images upside down, where they began to really appreciate the formal compositional aspects of the image. I got them to make both blind and partially peek drawings of the still lives. They then had to make paper constructions, extracting shape but playing with these spatially to create a series of little sets. These were photographed been very light conditions and at various exposures.

Working from the two-dimensional photographs by then produced a notan and study, a two tone study with black and grey and a five tone study with light grey, medium grey, dark grey and black. They began to think about the abstract qualities of their studies and these then could be used as a starting point for further visual investigation of course this could have been done using collage as well and potentially in this instance the shapes could be explored with further by moving around finding you compositional possibilities from the same starting point.

Drawing as process
At this stage it is useful to consider that the majority of these exercises are based upon the notion of observation trying to record what you can see but that doesn’t stop the possibility that
one can use other approaches: drawing systems help visualise the idea of what exists in the mind.
I remember vividly the moment why reign my brother drew around a matchbox, then offsetting the matchbox drew around it again. He then joined the corners to form a cubic structure. That transformation was, almost magical and that ability to think in space is incredibly useful, not just for architects, interior designers, product designers, but anyone dealing with spatial issues.

I have done a series of workshops for the last few years, with 3D design students, introducing, first and angle protection, oblique, isometric, axonometric and perspective projections. I have usually done this over a few days focusing on object and then space. It has been incredibly beneficial for the object makers to bring in the objects they have constructed and to discuss ways of drawing these forms, as well as introducing the students to a wide range of sculptors drawings. It is also beneficial to tie in a trip to Brighton museum and make research drawings. Rather than the student make a perspective drawing of an object, they draw a front elevation, side elevation of a artefact and then hone in on detailing. With this kind of information the full view can be drawn later.

Here is it useful to explore the drawing of everyday objects, in the last few years I have found the Argos catalogue really useful as a resource. However they are required not to draw the view in the photograph, but to draw the object from a different vantage point. This will enable the student to be able to apply not only a set of visualisation skill, but working in a space frame enables them to think on paper.

The construction of everyday objects, using the Lego building block technique, can be really empowering, enabling students to better visualise their ideas. It is useful to know how to construct an ellipse of any size,

Formal perspective can be introduced at this point too, which will enable someone to build a visual space, but also help improve their observation, by understanding how the space they see behaves. By building a floor plane, depth can be mapped out. A really useful starting point is to think of the end wall of a room and visualise one height against it and the part of the room one is opposite, building out from this point recessions planes.

It also useful understanding the technique of gridding on the diagonal, as each diagonal bisects the rectangle at the mid point, it enables the student to map recessional space, both forwards and backward into deeper space beyond the wall.

Contour
Contour can be a logical progression from this point, which will enhance both observation and spatial thinking across the form where head and hand come together to extract structural information from the subject. It can be useful to project a series of parallel lines over a form or wrap masking tape around it do that the tape forms a series of parallel lines. Lined paper can also, do the same thing and the paper can be cut, folded or scrunched to reveal the structure.

Moving on
Once these drawing foundations are established then one can move on to ask the more challenging questions of why drawing and how will it inform my practice? What is drawing and what can it be? How might others use drawing to communicate, to understand, to explore, record or express ideas? It seems interesting that a colleague of mine spent over 100 hours working on a single drawing at art school on the 1970s. The drawing holds the history of its making, reveals through its erased surface, indecisions, changes of mind and the ability to solve visual problems. So is a drawing measured by its outcome? Is it only good if it looks a certain way, or is the measure of a drawing based on what the student has learned in the making of it?

A drawing curriculum should introduce students not just to how to draw, but why they might draw, consideration here might explore the relationship between 2D and 3D, it might be embedded within the notion of deconstructed a drawing, moving around the elements discovering new possibilities and permutations. It might reflect on how drawings could be used for different purposes.

During a recent introductory project, I encouraged students to place a viewfinder over the top of a measured drawing and then use the composition contain within a small square to produce series of two-dimensional textile designs but also some three-dimensional forms.

Music Drawing
Over the last 20 years I have also encourage students to make non-representational drawings from music the session will normally start talking about the notion of Mark making and I get students to make a series of biro drawings thinking about the way that their wrist and hand moves to create a series of marks. We talk about the notion of non-representation and the fact that often students rely on existing symbols for instance the straight line with peaks and troughs. I get to students to think about the sound of their Mark making and how they alter the sound and the rhythm of the marks but also moving their body in different ways they can produce a much wider scope of Mark making. I will then continue this exercise where I get students to work on large sheets of paper we might need to use various strategies working only on one side rubbing up the whole the section of an image but these drawings will be worked on for about an hour where the drawings are constantly erased and redrawn building up a rich surface. These drawings then provide fantastic starting points for painting exercises here it is useful to introduce some visual colour strategies for instance the use of triads, discordant Hues colour, chromatic greys etc.

Economy of means
There might be a discussion of economy, gathering lots of visual information in a short space of time.

Students seem to fall into the trap that there is a direct correlation between time spent on a drawing and quality. Somehow if the student has spent a long time on it, it must be good. This often presents itself as time wasting. Why fill up large areas of the drawing in black fine line pen, when a brush ans in will do it much quicker. Perhaps there is something of the colouring in at work here. The fact that that has long been used an mental hospitals as a way of calming patients down and switching off their negative feelings, may have something to do with the massive rise in popularity of adult colouring books.

Paul Klee
There should be an emphasis on the journey, the notion of discovery, taking a line for a walk, pushing the notion of process, that a drawing might not be an affirmation of what the student already knows, but a series of investigations and questions.

A location project, taking students out, wresting the elements trying to work out how to draw this emotional or physical experience can open up whole new ways of working. I have taken students to the Devils Dyke, Ashington cactus farm, the Sealife centre, up to London, All sorts of venues, where the emphasis on drawing has been gather as much visual information as you can and then develop it further.

I have done a 500 paces project in Brighton where after 500 paces from a fixed location the student is faced with the challenge of what can they get out of this space?

A project I have been working on over the last two weeks starts with a making activity. Using series of lo fi materials, students experiment with the idea of how can these materials be transformed, and connected together? These objects may not be exciting in their own right, although this project (a former colleague of mine devised the project) it does demonstrate the real makers and crafters in the group, but become transformed through their translation into 2D through drawing painting and photography. The second day of the project open up the ideas.
offers new potentials and insights into how to transform the starting point without a sense of where the project is going. The third day then gets students to use their visual research to solve more specific design problems again using drawing to consolidate the project into a set of proposals.

Is this a problem?
What pathway, area of specialism, within the University does not touch on drawing in some form or another? Are we finding that over the years the basic skills of drawing are missing from our students? When I went to foundation all of us could draw, so we could all be taken to the next level in our drawing. Do we all have the time and the space to make up the shortfall and if we do not will we pay for the consequences?

Does a visual research programme offer a way forward, to provide students with a basis of knowledge that can then be built upon?

So why teach drawing? It would be interesting to think about someone who didn't get taught, who didn't go to an art school environment, who didn't look at the work of other artists and posit the notion of what they might produce at the end of a sustained period of drawing. I think there might be a considerable amount of repetition, drawing upon what the student knows already and not much evidence of development. It is certainly the case when I interview for the part time foundation course, that I often see this approach, whether it's a manga character, a superhero, transformers o doodled graffiti; forms, shapes, motifs, marks continue to be repeated. There is a huge profusion of drawing out there and a whole number of ways in which drawing can be approached. Teaching drawing is not about creating an atelier, where every student draws the same. I think the task of the drawing tutor is too introduce the student to the range and diversity of the territory, to give them a way in to the possibility and potential of the various languages of drawing, in much the same way that the kindergarten teacher gives a child a basic vocabulary. Adobe Illustrator is a tool that can improve the look of a drawing, it can give a drawing the energy and confidence of a more skilled hand, but one still needs to have an understanding if colour, tone form, mark making in order to get the best out of it. In the hands of someone who can draw, it is another part of the creative toolbox. Photoshop is able to manipulate images to extraordinary level but without a brain and an idea nothing can come out of the computer. There are tremendous opportunities for students today with a wealth of technology at their fingertips but let us not forget those basic skills, that can be taught and should be taught if we are to empower our students for their futures. As Saul Bass once said, to an interviewer asking him the question what would be your advice to students, his answer learn to draw, if you don't you are going to live your life getting around that! You can get by without it, you can even get a job, ... but you will have a crippling absence.¹²

¹² https://www.youtube.com/watch?v=S7l0mIlzx_1